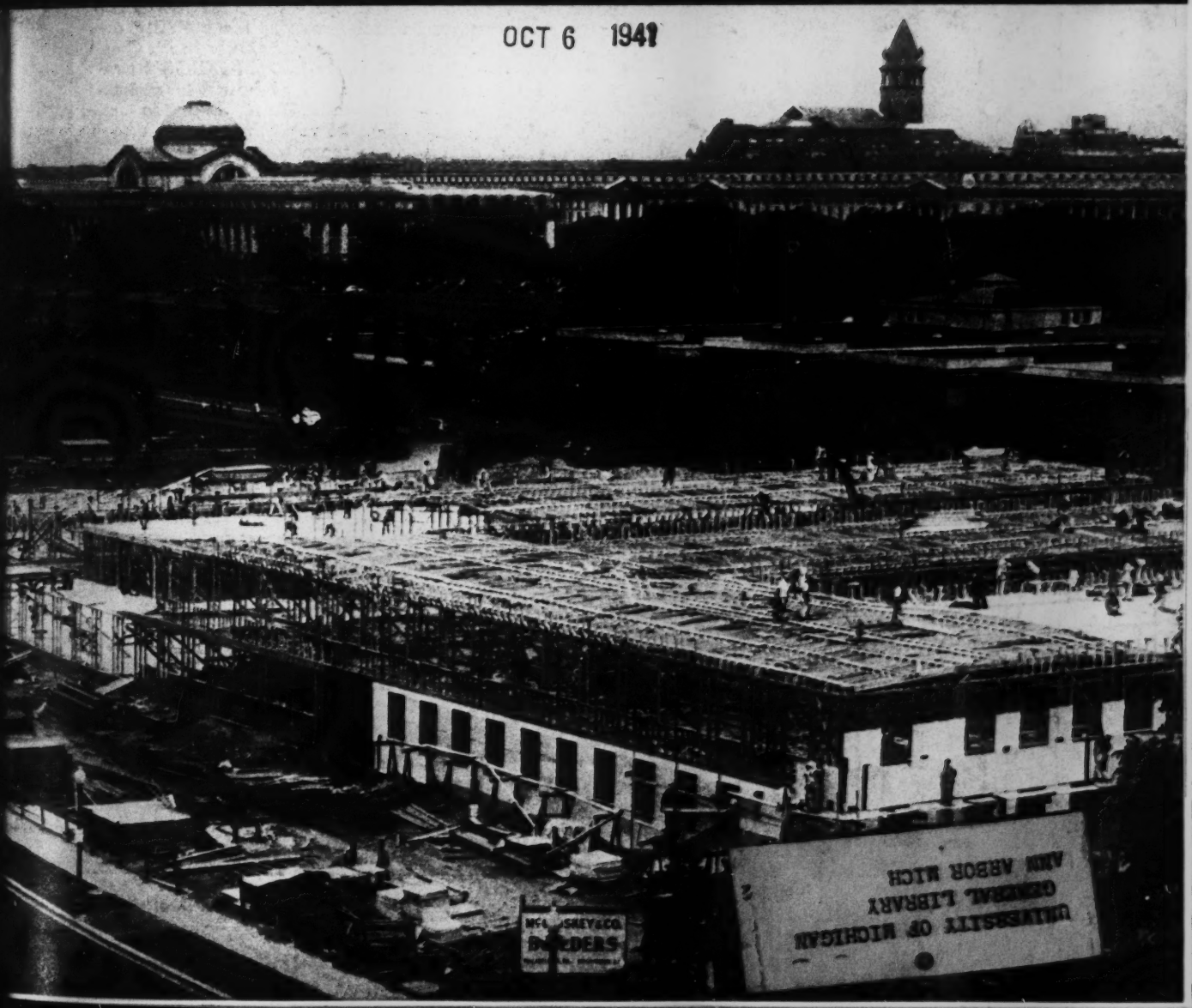
ENGINEERING NEWS-RECORD

Temporary office buildings rushed to provide space for defense agencies in Washington, D.C.

OCT 6 1941



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The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • OCTOBER 2, 1941

Recognition of rising costs in Chicago subway contract

Qualified award on a higher-than-estimate bid provides sharing of savings between actual cost and bid price, after reasonable profit. Details of modified contract outlined.

In recognition of the necessity of contractors bidding high to cover possible increases in costs, and yet wishing to protect the owner if such increases do not occur, the Department of Subways and Superhighways, Chicago, has awarded a contract for subway station construction on a modified basis. The contract was let on bids taken six weeks ago that were higher than the engineer's estimates, but the city and contractor will share any saving between actual cost and bid price, after the contractor has been allowed a reasonable profit.

On Aug. 7, 1941, bids were opened for three contracts for subway station work, known as Contracts F-1, F-2 and F-3. Bids were asked on the basis of separate contracts or a figure for all three contracts. The lowest combination of bids was that of W. E. O'Neil Const. Co., Chicago, for all three contracts, $977,279. This amount was considerably above the estimate, so the bid was taken under advisement. Discussions with the low bidder revealed that in line with the times he had added contingencies to take care of uncertain conditions in labor and material markets. The city recognized the necessity of the contractor bidding high under the circumstances, yet wished to be protected in case the increased costs allowed for did not materialize.

The following modified form of contract was adopted by agreement between Philip Harrington, commissioner of the department, and the contractor, ratified by the city council on Sept. 22: First, a flat reduction of $3,000 was made on a lump-sum item, bringing the total of the contract to $974,279. This amount was made up of estimated quantities on 81 unit bid items. In every case, the unit bid item is to be the top price paid by the city. The city, in cooperation with the contractor, will keep careful costs on every item. All direct costs, such as labor, material, insurance and equipment rental or depreciation, will be allowed. Then the contractor will be allowed 10 percent profit on work done himself, 5 percent on work done by subcontract. If the actual cost, plus profit, on any item is less than the unit bid price, the contractor and city equally share the saving; if more, the contractor is paid only the bid price. Home office overhead is assumed to be taken care of in the profit.

Details of contract

That portion of the contract covering the above provisions follows:

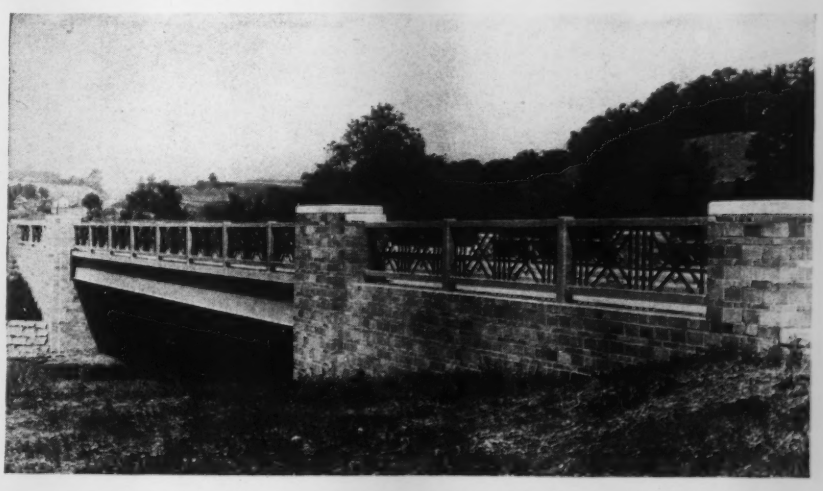
For work performed or expense incurred by the contractor other than for subcontract work:

(a) The actual cost to the contractor of labor directly employed on the work;

(b) The actual cost to the contractor for materials and supplies to be incorporated into or used in the performance of the work, which actual cost shall be construed to include, but not limited to, the cost of constructing or leasing and operating necessary field offices, and the cost of permits, licenses, water, power, telephone and other similar services, and repairs to equipment and power tools required for this contract. The fair salvage value, as determined by the commissioner, of materials and supplies which have been supplied by the contractor for the performance of the work but which have not been incorporated into the work shall be considered by the commissioner in his determination of such actual cost;

(c) The actual cost to the contractor of the rental of equipment and power tools which actual cost shall include a fair rental price, as determined by the commissioner, of equipment and power tools owned by the contractor. All equipment and power tools shall be in first class operating condition when brought to the site of work;

(d) The actual cost to the contractor of



Brick facing used for Ohio highway bridge

One of four distinctive structures built in the state of Ohio, this new highway bridge on U.S. 30 in Starrett county, Ohio, has the piers, abutments and handrail posts faced with brick. The crossing is over Black Run at the edge of the village of Robertsville and provides a 40-ft. roadway plus a 4½-ft. sidewalk on either side. The span is 64½ ft. and the structure is located on a curve with the piers skewed 45 deg. to the roadway centerline. The bridge has a special steel railing painted two shades of green with orange trim.

The new crossing was built as a part of a 3-mi. improvement by the General Asphalt Paving Co., Canton, Ohio, for the Ohio State Highway Department under total contract price of $444,000.

direct supervision of work performed by any subcontractor of the contractor as well as direct supervision of work performed by the contractor, which actual cost shall include the actual cost to the contractor of employees of the contractor, including superintendents, assistant superintendents, technical engineers, safety engineers, timekeepers, clerks, watchmen and other such employees who perform work of a general nature directly connected with the work:

(e) The proportional share of the cost to the contractor of the required contractor's performance bond, such share to be the ratio which the total cost to the city of such work or expense incurred by the contractor, other than for subcontract work, bears to the total cost to the city of all work as established by the final estimate;

(f) The proportional share of the cost to the contractor of the required insurance, such share to be the ratio which the total cost to the city of such work or expense incurred by the contractor, other than for subcontract work, bears to the total cost to the city of all work as established by the final estimate;

(g) The cost to the contractor of social security taxes, unemployment taxes, occupational taxes and other excise or sales taxes; and

(h) An amount equal to ten (10) percentum of the total amounts computed under sub-paragraphs (a) to (g), both inclusive, of this paragraph.

General office expense of the contractor whether directly or indirectly applicable to this contract; the cost of plans required to be furnished by the contractor to the city; the cost of hand tools (defined to be tools which a man is required to carry and use in the performance of the work but which do not require electricity, compressed air or other similar energy for their operation), accounting, estimating, correspondence, postage and any other similar cost of the contractor shall not be considered as "cost" within any of the sub-paragraphs in the above paragraph.

Similar provisions are set up to cover subcontract work. The contractor must also obtain the written approval of the commissioner for: Award of each subcontract; purchase of materials more than $200; rental price and time of use of each piece of equipment and power tool; each contract for utility and similar services; and wage rates to be paid for scales or classifications differing from those set up in the general contract. The supplemental agreement also fully covers accounting procedures for determining the costs, and provides for the city deducting half the difference between actual costs plus 10 percent (on subcontract work 5 percent) and the unit bid price if the bid price is higher. Also, the city may redesign or change items without liability to the contractor.

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Vehicular tunnel may be built under Panama Canal

Reliable sources report that a vehicular and passenger tunnel may be constructed under the Pacific end of the Panama Canal to accommodate the increasingly heavy traffic to and from the west side of the waterway. It was reported that a special appropriation of about $15,000,000 is to be asked of Congress within a short time for the work.

For some time Panama Canal officials have been considering the construction of either a bridge or a tunnel to replace the ferries that now make possible 90,000 cars monthly crossing the waterway. Several weeks ago a responsible canal official reported that studies on a bridge had been suspended and that all efforts were being directed toward plans for the tunnel.

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Toll revenues increase on Kentucky bridges

Receipts from fifteen state-owned bridges increased $171,964 during the first eight months of 1941, as compared with a similar period in 1940, according to Mitchell Tinder, controller for the Kentucky Department of Highways. Traffic during the same period increased by 1,196,806 units. The revenue increase was 13.3 percent, while the traffic increase was 18.5 percent.

A much earlier date for removal of tolls on some of the bridges will be possible if traffic continues to be so heavy.

Highway safety progress shown by new and old bridges in Indiana

The new bridge at the left, which is designed for dual-lane traffic, and the old structure at the right with curves on the approaches indicates how Indiana is modernizing its state highway system for greater safety and more convenient movement of traffic. The dual-lane bridge, located just west of Plainfield, is a part of the extensive construction program nearing completion on U. S. 40 between Indianapolis and Terre Haute. At the present rate of progress, paving and bridge construction projects between Bridgeport and Plainfield and between Putnamville and Brazil will be ready for traffic by Dec. 1.

Completion of these two sections of dual-lane highway, will finish the widening of the National Road between Indianapolis and Terre Haute, under way since 1936. Dual-lane construction is in progress on other Indiana heavily-traveled state highways; including U. S. 20 between Michigan City and South Bend; U. S. 31 south from Indianapolis; U. S. 41 north from Evansville; and U. S. 24 southwest from Huntington. Similar construction has been inaugurated on U. S. 30 east through the Calumet area, and on U. S. 40 between Indianapolis and Richmond.

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New England waterworks men study works programming and priorities

F. H. Kingsbury elected president at 60th annual convention at which John R. Baylis of Chicago is honored for his work on filter operation and maintenance

Public works programming as related to the post-war economy, and the effect of priorities on waterworks operation were highlight topics at the 60th annual convention of the New England Water Works Association, held in Boston, Sept. 23-26. At the meeting, which drew an attendance of 720 and 55 exhibitors, Francis H. Kingsbury, senior sanitary engineer of the Massachusetts state department of health, was elected president of the association.

Active steps should be taken, said William Stanley Parker, chairman of the Boston city planning commission and consultant to the National Resources Planning Board, to prevent a repetition of affairs in 1933, when an emergency program of public works suddenly was developed to meet a critical unemployment situation. He urged all communities to undertake now the preparation of a six-year program of public works improvement, which would form the basis for action in a post-war period of unemployment.

It is the aim of the federal government, through the National Resources Planning Board and the recently created Public Works Reserve project, said Mr. Parker, to aid in the development of these local long-range programs. Basic procedures for the initiation of such programs have been determined and regional field offices have been established to provide assistance to local communities in the formation of such studies (See *ENR* Sept. 18, 1941, p. 390).

Priority problem

Addressing himself to the question of how waterworks operations shall be conducted under emergency conditions now facing the country, Harry Jordan, secretary of the American Water Works Association, listed these four principal problems: maintaining personnel for service, protection against sabotage, repair of damage caused by acts of war, and procurement of materials necessary to maintain service.

Because our national defense effort requires the diversion of many materials from their traditional uses into production of war goods, said Mr. Jordan, there is much talk of using substitute materials in waterworks, which have a shorter time of useful service than the standard specification material. While there are many useful substitutes and waterworks can get along with many things formerly found satisfactory, there is every reason why temporary military projects likewise should be adjusted to the same pattern. "There is simply no sense," continued Mr. Jordan, "in the laying of heavy grade cast iron pipe in a temporary training center and allowing permanent public water supplies the use of only secondary light weight or short lived materials."

Reporting on developments in priority administration, Mr. Jordan said that those in authority recognized the special status of water supply as an essential service necessary to defense and, as rapidly as administrative procedures can be established, are defining this preferred position in procurement of materials. He cited the P-46 Maintenance and Operation order issued by OPM on Sept. 17, 1941, which sets up preferred positions for utility services, and the Project Rating system adopted by OPM, which makes it possible now for a major waterworks extension in defense centers to obtain a preferential rating.

New service pipe

A newcomer among the exhibitors was the American Smelting & Refining Co., who used this occasion to introduce "Tube-loy," a lead alloy water service pipe. The material from which this pipe is extruded is a lead compound containing small quantities of magnesium, calcium and tin. The addition of the latter three elements is said to improve the mechanical characteristics of lead so far as strength, ductility and creep rate are concerned.

Mr. Kingsbury succeeds Leland G. Carlton, superintendent of the Springfield, Mass. waterworks, as president. Other new officers elected included: Horace L. Clark, superintendent of the Sanford, Maine water district, as vice president; and Arthur Shaw, of the consulting engineering firm of Metcalf & Eddy, as a director of the association.

John R. Baylis, physical chemist of the Chicago department of public works, received the Dexter Brackett memorial medal awarded each year for the most meritorious paper presented to the association. Mr. Baylis' paper dealt with water filter operation and maintenance.

F. H. Kingsbury, new president of the N.E.W.W.A.

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Hurricane damage to Texas highways not great

Despite the high wind, heavy rainfall and the size of the area involved the tropical hurricane that passed over the middle Gulf coast region of Texas on Sept. 24 and 25 did comparatively light damage to highways, lateral roads and bridges, according to reports by the Texas state highway commission and other official sources. It is roughly estimated that $1,000,000 of the probable $8,000,000 total loss would cover that which was inflicted upon transportation lines. In Harris County (Houston county seat) the road and bridge damage is placed around $100,000.

Much of the structural damage due to the storm was in the form of washed-out approaches to bridges and culverts throughout the five counties where the maximum damage occurred. Motor vehicle traffic on virtually all of the highways and roads of those counties was tied up by fallen trees and other debris for several hours after the storm had passed inland. The wind's highest velocity was 100 miles per hour, but this velocity was reported in only limited areas.

The City of Houston with a population of 400,000 people, while not in the storm center, suffered losses estimated at more than a million dollars. The industrial city of Freeport, which is on the coast, was in the direct path of the storm, but the city, as well as the new $27,000,000 plant under construction by the Dow Chemical Co., came through the storm with little damage.

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Legalities removed for southern pipeline job

The Georgia Supreme Court on Sept. 15 dissolved an injunction restraining the Southeastern Pipeline Co. from constructing a gasoline pipeline along Georgia State Highways. Counsel for the pipeline company said that the decision cleared the last legal barrier for completion of the pipeline from Fort St. Joe, Fla. to near Chattanooga, Tenn.

Head house and seven wings were rapidly near completion when this view was taken.

Temporary buildings aid Washington office problem

Ground floor consists of 2x12-in. joists on 16-in. centers, blanket type insulation, diagonal sheathing, building paper and then oak flooring.

To provide more than 700,000 sq.ft. of greatly needed office space in Washington, D. C., the Public Buildings Administration is erecting six two-story temporary frame buildings and funds are already appropriated or requested for construction of several more such structures. Typical of the new buildings is that on Independence Ave., a project known as "D" building.

This building provides 118,800 sq.ft. of floor space and consists of a 47½ by 527½-ft. head house paralleling Independence Ave. from which seven 47½ by 160-ft. wings extend outward to the north with 32½-ft. wide light courts between. Excavation for this $510,000 project was begun May 23, the first employees were moving in Aug. 4, and the entire unit was completed 52 working days after excavation started, demonstrating that such construction makes office space available in a short time. The maximum employees of the general contractor was 482 men on June 26 and the average daily force was 263. Only one shift was employed and there was no work on Saturdays, Sundays, and holidays.

Outside foundations consist of individual reinforced-concrete pedestals on spread footings at each column location with a 6-in. plain concrete curtain wall between. The two rows of interior wooden posts, extending the long way of the head house and down all wings on both floors, are supported on similar pedestals surmounted by 12x16-in. reinforced-concrete beams, also running the long way of the building.

Joists for the ground floor are 2x12-in. yellow pine members. Between these a 1-in. thick blanket-type insulation is hung with a 1-in. sag to provide air space. The floor consists of yellow pine diagonal sheathing covered by a layer of moisture-proof building paper and then a 1-in. second grade oak flooring.

Surmounting the 8x8-in. fir posts which form the free standing columns on the ground floor are 10x14-in. oak beams running the long way of the building. These beams support the second floor joists, which are the same size and on the same spacing as for the first floor. To the lower edge of the joists for the second floor, which consists of diagonal sheathing plus second-grade oak, is nailed the ⅜-in. fireproof gypsum wallboard that forms the ceiling for the first floor. The free-standing columns on the second floor are 6x6-in. fir members on top of which 8x14-in. oak beams are used the long way of the rooms, while the second floor ceiling consists of a ⅜-in. thick layer of gypsum fireproof wallboard material.

Rafters for the building consist of 2x10-in. yellow pine timbers on 16-in. centers. Over the rafters is used a 1-in. blanket insulation, as below the first floor, covered with a 1-in. sheathing, a single layer of waterproof building paper, and then a two-ply built-up roof covered with sand.

For the outside walls an exterior layer of 3/16-in. asbestos board is used over a ½-in. insulation board nailed directly to the studding, which is made up of 4x4-in. and 2x4-in. members, as illustrated by an accompanying photograph. On the inside a ⅜-in. fireproof gypsum board is used directly on the studding. On 8-ft. centers 4x6-ft. steel sash windows with wooden frames are installed.

Stairways are placed at the extreme end of the wings, and near the junction of the wings and the head house. The stairways are made fireproof by use of 3/16-in. asbestos board nailed to each side of the 2x4-in. studs with the space between filled with a blanket of rock wool. On the room side a ⅜-in. gypsum board is used over the asbestos boards to

maintain uniform interior walls. Stairs and landings are of steel and hollow metal doors with reinforced glass are called for at the stairway entrances. At the junction of wings with the head house a continuous firewall similar to that surrounding the stairways is required from foundation to roof.

Additional protection against fire is provided by six lines of sprinklers installed along the 47½-ft. width of the head house and wings. The sprinkler system is so arranged that if a valve controlling any part is changed an alarm sounds in the building's central office. Likewise, when any part of the sprinkler system goes into operation, an alarm sounds in the building's central guardhouse and in the nearest office of the fire department of the city of Washington.

The building is heated by steam obtained from a central heating plant for all government buildings in Washington; radiators are installed at the exterior walls below each window. Hot water for the washrooms is supplied from one central 15x25-ft. room located near the center of the head house below the first floor, and in this room are also located the heating controls and the sump pump for discharging condenser water to the sewers. All steam pipes, water mains, and similar utilities are carried to various parts of the building in trenches that were excavated in the foundation soil before construction began. Although these trenches are not to be lined, they give quick access to the utility lines for repair and inspection.

Monitors on the roof of the building, to be seen in an accompanying illustration, each house two electrically driven 3-ft. diameter fans. These are operated to exhaust the air from openings in the ceiling on the second floor.

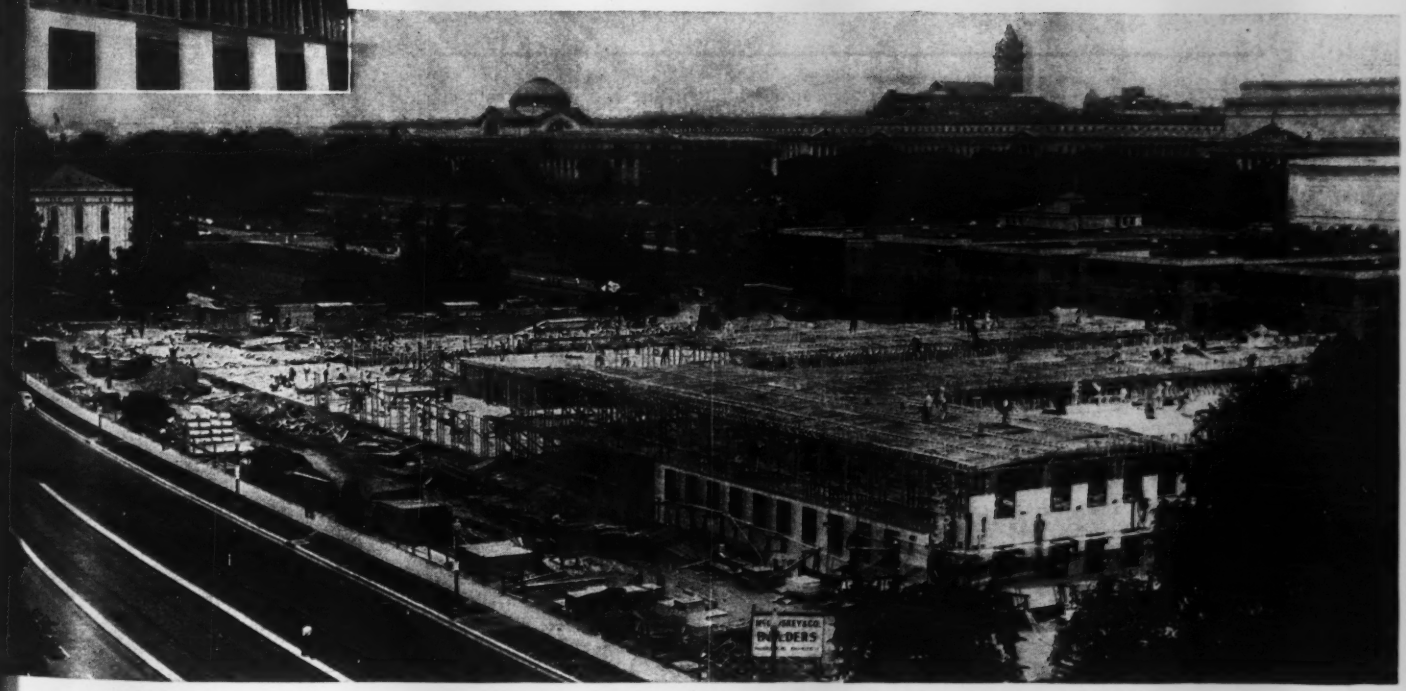
For lighting a single indirect fixture with a 1,000-watt bulb is used for each 15½ by 16-ft. bay.

Plans were prepared by the supervising architect's office of the Public Buildings Administration, and J. T. Davis was PBA's construction engineer. McCloskey & Co., of Philadelphia, was the general contractor with Nelson Tallman, general superintendent.

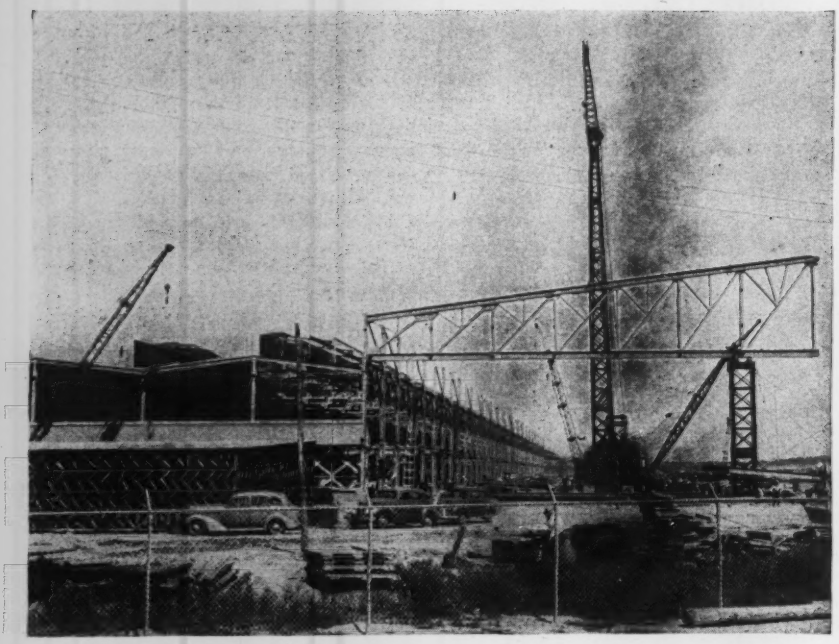
Interior arrangement is illustrated by second floor view at right. Note sprinkler system, also openings in ceiling for forced ventilation of upper floor.

Exterior wall framing (See picture at left) consists mainly of 2x4-in. and 4x4-in. members. Openings are for 4x6-ft. steel sash windows.

All photos by Federal Works Agency



View above shows numerous phases of work underway and how job lent itself to rapid construction by use of a large contractor's force. It should be noted that general contractor is not erecting walls in sections, although all walls were designed for this type of erection if builder chose.



Goodyear rushes defense plant job at Akron

Speed is the watchword on construction of the Defense Plant Corporation's new aircraft parts plant which is being built by Goodyear Aircraft Corp. at Akron, Ohio. Shown is construction of a 1,000 ft. long and 400 ft. wide building, which will require more than 400 tons of structural steel for the framework alone. The 400 x 1,000-ft. structure will be devoted to manufacture and fabrication of metal airplane parts, such as tail surfaces, outer wings and other assemblies. Clemmer Construction Co., Akron, is general contractor for the project, which is estimated to cost $3,700,000.

The new plant and its immediate area, including railroad siding, roads, and parking areas, will comprise 25 acres.

In addition to the new plant, Goodyear is constructing a second airplane parts manufacturing building that will provide more than 85,000 sq. ft. additional floor space.

Ruling made as to damages from Grand Coulee Dam

U. S. District Judge Schwellenbach last week at Spokane, Wash., ruled against the Washington Water Power Co. and in favor of the federal government's contention that no power site value can be attached to the company's land in the Kettle Falls, Wash., area. The land was submerged by the Grand Coulee Dam reservoir. The judge quoted a decision of the circuit court of appeals, which ruled that no power site value can attach to land, since such value depends upon the bed and flow of a stream and these are owned only by the state and federal governments.

If the circuit court of appeals does not reverse Judge Schwellenbach's decision, all the company will get for its property is the $7,950 which the government already has set up as payment for it as agricultural land.

Judge Schwellenbach's decision pointed out that the government's objection to testimony on the power site value of the land rested upon two factors. These are: (1) that the riparian owner has no property right in the bed of a stream or to use of the water, and (2) that because 518 other tracts would have had to be assembled for a Kettle Falls Dam basin, the owner of no one tract is entitled to value which can only become actual through possession of all tracts.

The Washington Water Power Co. testified it had spent $150,000 for the site and another $350,000 in developing it with the intention of constructing a dam.

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Arkansas road body may grant highway easements

Attorney General Jack Holt of the state of Arkansas has ruled that the Arkansas State Highway Department has the right to grant easements on highway rights-of-way within a flood-control reservoir area. His opinion was in answer to a request from attorneys for the highway department on that status of parts of State Highways 27, 28 and 60 in the area to be flooded by Nimrod Dam on the Fourche La Fave River in Perry and Yell counties.

Design studies advance for new Tacoma Bridge

With settlement of the Tacoma Narrows Bridge insurance suit giving the Washington State Toll Bridge Authority $4,000,000 in cash and all that can be salvaged from the old bridge, engineers for the authority, under C. H. Andrew, state bridge engineer, are working on plans for a new structure to utilize the existing piers. Eight designs are reported under consideration. A four-lane roadway, as compared to the former two-lane structure, is believed assured. The deck would be carried on an open truss, offering less resistance to the wind than the original bridge deck, which was supported between girders. No attempt will be made to use the towers or cables of the collapsed bridge.

Plans for the new towers call for broader, taller structures, which will not taper as the present towers do. Four-foot sidewalks bracketed out around the towers are proposed. The existing piers must be redecked to carry the wider towers.

Although the office of Governor Arthur B. Langlie reports a traffic survey would have to be made before a definite idea could be obtained of how much money would be available for a new bridge, the opinion prevails in engineering circles that cost of the new structure will be about $7,000,000, exclusive of piers.

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Iowa road department orders longer work week

The Iowa State Highway Commission has shifted its maintenance men permanently from a 40-hour week to a 44-hour week. The longer week has been on an experimental basis during the summer, replacing the shorter week in force for several years. Hourly laborers will receive a 10 percent pay increase by working the additional time and those on a monthly scale are being given salary increases between 5 and 10 percent. The reason for the change is the difficulty in getting sufficient workmen to make the shorter shift practicable.

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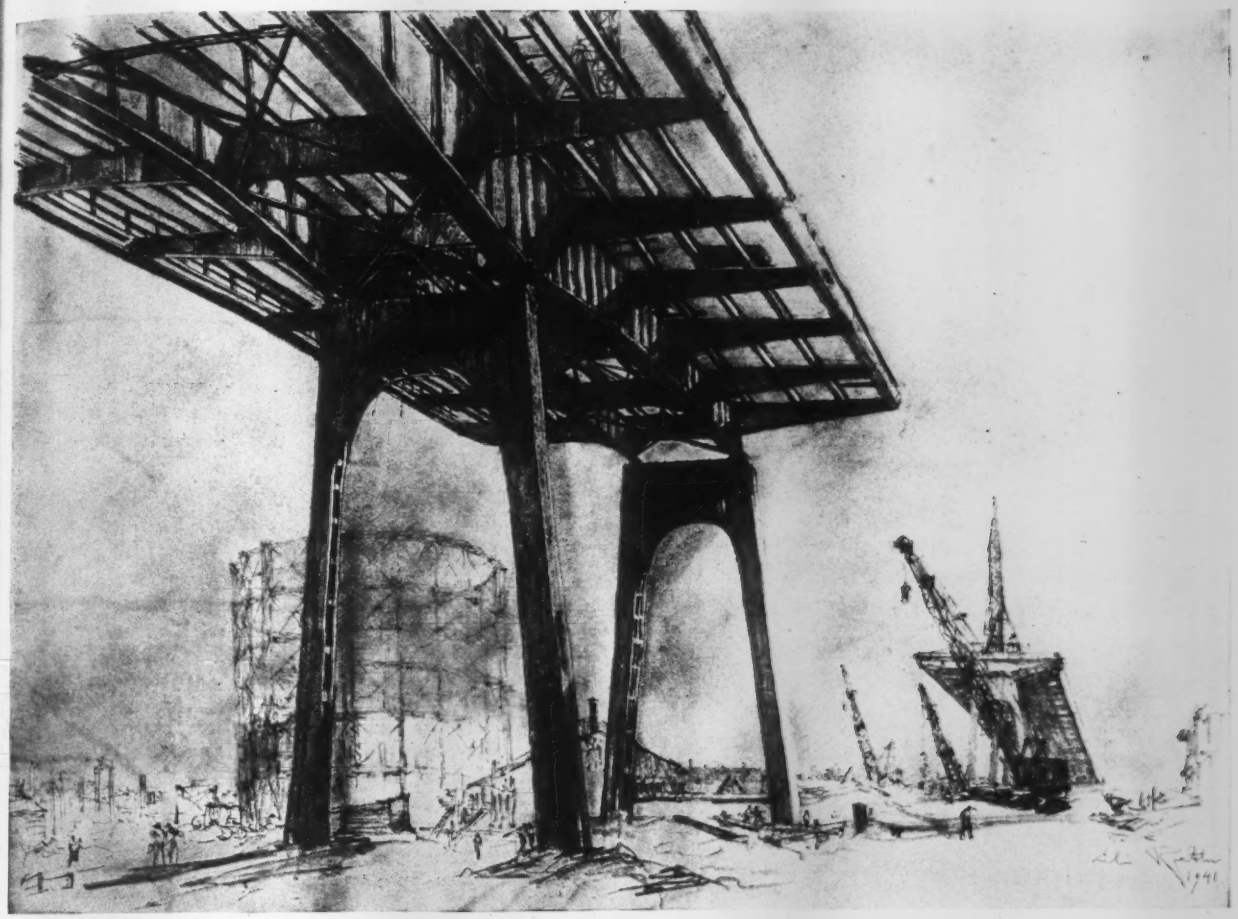
Traffic record set for Delaware River Bridge

Vehicular traffic over the Delaware River Bridge at Philadelphia was heavier during the month of August than in any month since the bridge was opened in July, 1926. A total of 1,650,833 vehicles crossed the span, an increase of 10.7 percent over the same month last year. Bridge tolls amounted to $365,000. Heaviest traffic for any one day was Sunday, August 10, with 79,609 vehicles.



Gowanus Parkway to be completed in November

Built to provide a non-stop express connection between the $84,000,000 Battery-Brooklyn tunnel now under construction and the Belt Parkway completed last year (*ENR*, July 11, 1940, p. 60), the 4-mile Gowanus Elevated Parkway in Brooklyn will go into service in November as another link in the New York City parkway system. The new route, which is costing $15,000,000 for land and construction, starts at the tunnel's Brooklyn Plaza and extends southeastward along Hamilton Ave. for ½ mile to Prospect Ave., where it turns to the southwest to extend nearly 3½ miles along 3rd Ave. The route then curves to the west to join the Belt Parkway at Owl's Head Park. When both the parkway and the Battery-Brooklyn tunnel, which is scheduled for completion in 1944, are in service, an express route completely encircling New York City will be available.

The new parkway gets its name from Gowanus Canal, which it will cross on Hamilton Ave. by a high level bridge to fill the gap shown in the accompanying illustration. The Gowanus Canal bridge will provide a clearance of 95 ft. above mean low water and will consist of three-span continuous girder construction with a 216-ft. center span.

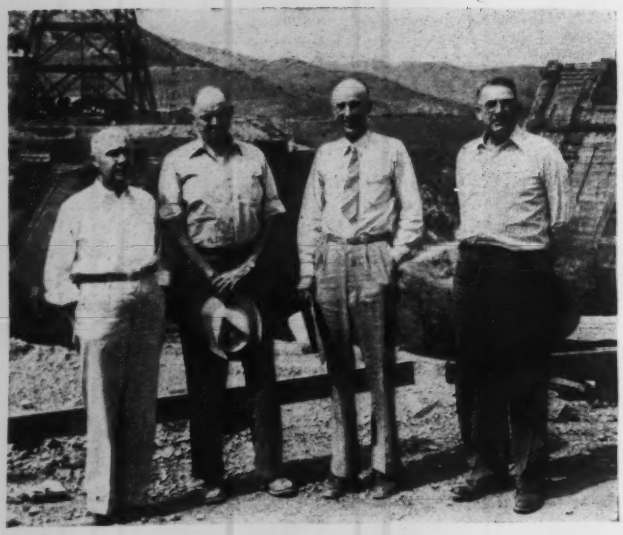
Along Hamilton Ave. the elevated structure provides two 34-ft. roadways separated by a 4-ft. center strip, which permits three lanes of traffic in each direction. Typical construction here is three-span continuous girder units carried by two-column bents with combined footings resting on steel piles. The structure is unusual by virtue of its cantilevered roadways. This design confines the supporting bents to a 34-ft. width in the center of the 160-ft. right-of-way permitting it to accommodate a 51-ft. street and a 12-ft. sidewalk on either side of the bents. Local traffic on these surface streets will be carried across Gowanus Canal by single-leaf bascule crossings on either side of the parkway.

From where it turns south at Prospect Ave. to Owl's Head Park, the elevated structure will provide two lanes of traffic each direction separated by a center mall. For the 2-mile section along 3rd Ave. from Prospect Ave., to 44th St., the parkway is all new construction with the typical design two-column bents supported on combined footings. Here also the roadway is cantilevered outward such that only a 26-ft. width is occupied by the parkway at street level. The 180-ft. right-of-way can, therefore, accommodate a 62-ft. roadway (six lanes of traffic) and a 15-ft. sidewalk on either side.

For the southermost 1½ miles of the new parkway, use is made of a 50-year-old elevated railway by strengthening the old columns and by other changes. For this portion of the new route, no change of roadway width at street level is planned.

That rapid progress has been made on the new parkway is revealed by the fact that the first contract, which was for the soil testing work, was let April 10, 1940.

The work is being carried out by the Triborough Bridge Authority, Robert Moses, chairman, except for the bascule bridges across Gowanus Canal, which are under construction by the Department of Parks, City of New York. Madigan-Hyland, New York, are the engineers of design and construction for the entire project, excepting design of the bascule bridges, which was done by Waddell & Hardesty, New York. At one time as many as 30 contractors were at work on the project.



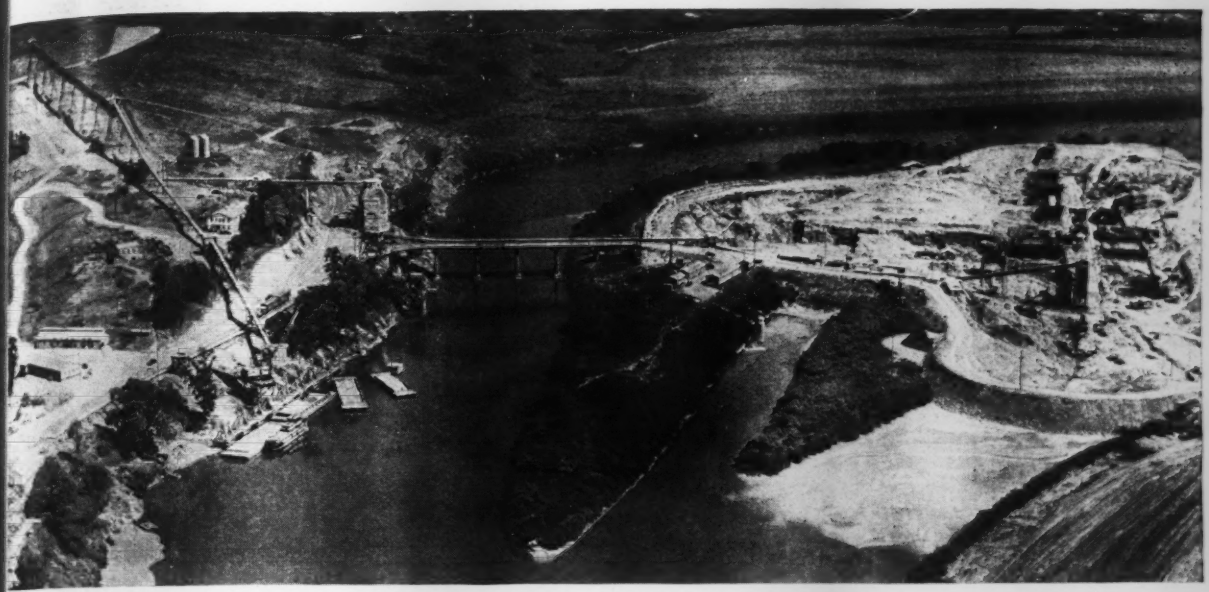
How to speed completion of the Central Valley Project in California in order to contribute sooner to the nation's defense effort was the subject for discussion when the men at the left got together at Shasta Dam. Left to right they are: J. L. SAVAGE, chief designing engineer, U. S. Bureau of Reclamation; FRANK CROWE, general superintendent, Pacific Constructors, Inc., general contractors for the Shasta work; S. O. HARPER, chief engineer of the bureau; and RALPH LOWRY, bureau construction engineer directing the building of Shasta Dam.

MEN AT WORK

Construction of three thousand dwellings for industrial workers of aircraft plants in the San Diego, Calif., area is the big worry of the two at the left. GORDON S. BARBER project engineer for the Public Buildings Administration, which is doing the work, is at the left. He is talking with HOWARD C. MANN, general construction manager for McNeil & Zoss Construction Co., general contractors.

Moving day for a unit of a New York hospital was attended by the group at the upper right. They are, left to right: CHAS. B. SPENCER, of Spencer, White & Prentis, Inc., contractors for moving the 5-story 2,300 ton building; WM. HODSON, commissioner of welfare of New York City; and E. H. PRAEGER, dean of civil engineering at Rensselaer and chief engineer of the New York consulting firm of Madigan-Hyland.

The fellows at the lower right did the work in moving the hospital building mentioned above. Left to right they are: Geo. Flay, job engineer, Jos. C. Weaver, general superintendent and "Mike" Canale, job superintendent, all of Spencer, White & Prentis, Inc., contractors. The broad smiles of the last two men indicate that the building is moving satisfactorily while Mr. Flay's look may express concern over one corner of the structure being a sixteenth out of plan location. For details of the moving work see ENR Sept. 11, 1941, p. 336.



Concrete placing started for world's highest lift lock at TVA's Fort Loudoun Dam

At Fort Loudoun Dam, under construction by the Tennessee Valley Authority near Lenoir City, Tenn., 55 river miles below Knoxville, lock concreting has started in an expedited construction program. The lock chamber at the right is 60 x 360 ft. inside and it will have an 80-ft. lift, which is believed to be the highest single lift in the world exceeding by 5 ft. the new lock at Pinopolis Dam on the Santee Cooper Project.

Concrete materials come to the job in river barges and are transported by belt conveyor to the storage yards at the left. They are reclaimed as needed through a tunnel and delivered by belt conveyor to the concrete plant on the left river bank. After mixing another conveyor carries the concrete across the river to one end of the lock where it is loaded, through a big hopper, into buckets for transport to the forms. The location of the dam is marked by start of excavation at right angles to the lock.

The construction scheduled has been advanced so that the reservoir will be filled about March of 1943 with all work to be completed one year later. A total of 240,000 cu. yd. of concrete and 1,500,000 cu. yd. of enbankment will be required for the main structure, which will be similar to the other main river dams on the Tennessee River. Installed power will be two 32,000-kw. units with provision for two more. The units will operate at a 71 to 80 ft. head. Very little storage for either flood control or power is contemplated, reliance being placed on the storage in the reservoir of Cherokee Dam up stream.

C. E. Blee is project manager and J. K. Black, construction engineer for this project at Fort Loudoun Dam.

Pan American road will open officially next year

Official opening of the Pan American Highway on October 12, 1942—a date commemorating the 450th anniversary of the discovery of America—was established by a recommendation passed at the fourth Pan American Highway Congress held in Mexico City, September 14-24. Although delegates of some of the countries indicated that sections of the highway would not be completed, the suggestion presented by Argentina that a definite dedication date be fixed was accepted by the convention.

A resolution passed by the convention recommended unification of traffic regulations in all countries served by the highway, including governmental examinations for drivers' licenses. Another resolution urged that all Pan American countries devote to road construction and conservation work taxes to be placed on gasoline and other motor fuels used by highway traffic, together with additional taxes for road-building and maintenance work. A regular exchange of statistics and all publications of a technical nature among the road commissions was recommended.

The convention approved a proposal for organizing an international federation of automobile associations as a proper means of developing public interest in completing construction of the highway. A proposal by Argentina that each country served by the highway appoint a technical commission to handle local problems in connection with road use was approved.

Delegates to the convention were entertained with Mexican hospitality including a pageant, dinners and excursion trips over sections of Mexican roads in the vicinity of Mexico City.

In connection with the convention an exhibit of road-building equipment and materials was presented. The exhibit was considered the best display of the road-building industry to be held in Mexico and received the praise of government officials and visiting engineers. The Mexican government was represented in the exhibit with displays of maps, pictures, tables and models.

The next meeting of the Pan American Highway Congress will be held in Lima, Peru, in 1943.

Steel output to be aided by simplification

Increased production of steel from existing facilities during the national emergency is expected to result from a new project launched by the Office of Production Management, Washington, D. C. The plan is for concentration on a minimum number of steel specifications, compositions, sizes and shapes. At the request of OPM the American Society for Testing Materials, the Society of Automotive Engineers, and the American Iron and Steel Institute will carry out the work in collaboration with the War and Navy Departments under the general supervision of OPM.

The plan is to establish as promptly as possible a selected list of steel specifications, which will be designated national emergency steel specifications. This in effect involves the selection of the minimum number of steel specifications, compositions and shapes necessary to meet national defense requirements. In general new specifications will not be written but selections from existing ones used.

MEN AND JOBS

Carl Schwob has resigned as district engineer of the Illinois State Board of Health, Chicago, to join the Yeoman Bros. Company, pump manufacturers, Chicago. Mr. Schwob figured prominently in the cleanup of the typhoid epidemic at the Manteno state insane hospital in 1939. (*ENR*, Sept. 7, 1939, p. 306 and Oct. 26, 1939, p. 517).

Frank Donnelly, assistant Labette county engineer at Oswego, Kan. has resigned to accept the position of city engineer at Parson, Kan.

H. M. Pafford, former city manager of Waycross, Ga., and for several years with the Georgia Highway Department, has been made city manager of Douglass, Ga., a newly created office.

J. K. Evans, project engineer of the Public Building Administration, who has been supervising the construction of two defense housing areas at Fayettville, N. C., for the past several months, has been transferred to Wichita Falls, Tex., where he will supervise the construction of a housing project in connection with the army airbase there.

William Huntley, superintendent of the water plant at Pawnee City, Neb. for the past several years, has resigned to accept a position as superintendent of operations of the water pumping and softening plant at Rulo, Neb., operated by the Layne-Western Co. of Kansas City, Mo.

W. O. Spence, former superintendent of the Sanford, N. C., water works, has just accepted a position as chief operating engineer of the waterworks at the Fort Bragg, N. C., army center.

L. B. Ackerman, Bureau of Reclamation engineer, who for the past three years has been assigned to the migratory fish control project at Wenatchee, Wash. as field engineer, has been transferred to the Spangler Dam at Weiser, Idaho, as resident engineer.

Arthur Cudworth, Denver engineer, who for the past three years has been affiliated with the Colorado Builders Supply Co. as engineer, has resigned to accept a position with the Denver & Rio Grande Western R.R. in the Denver offices.

Don A. McKinnon, former Montana state highway engineer and lately operator of the McKinnon Oil Co. at Helena, has accepted a position as engineering chief for the construction of a $20,000,000 ammunition plant at Parsons, Kan.

Leon Thompson has just been elected town manager of Zebulon, N. C.

Mervyn H. Hatch, for the past 18 months superintendent of the Auburn (Me.) street department, and connected with the city's engineering activities for the past decade, resigned his post on Sept. 8.

William H. Hall, since December 1940 assistant city engineer at Oklahoma City, Okla., resigned recently to join the teaching staff of the civil engineering department of Oklahoma A. & M. College, Stillwater. Professor Hall has worked as assistant in the engineer's office at Craig County, Okla., with the Oklahoma State Conservation Commission as field engineer, and in the construction division of the Oklahoma State Highway Commission. While with the highway department he spent two 9-month periods on leave for advanced engineering study at Oklahoma A. & M.

O. L. Kipp, assistant chief engineer of the Minnesota State Highway department since 1939, also has been named planning engineer. The move has been made in recognition of the need for long-range highway planning. Mr. Kipp has been in charge of highway construction for the department for 20 years; his new post will add supervision over highway location and design of work preliminary to the award of contracts. **C. L. Methven,** assistant construction engineer for the past 12 years, has been named road construction engineer, in which position he will have direct charge of construction work from the time contracts are awarded.

M. E. Hornback, graduate of the University of Missouri with the class of 1912, has been appointed assistant chief engineer of the Aluminum Co. of Canada, Ltd., Montreal. In 1915 he joined the staff of John S. Metcalf Co., Chicago, as designer, and in 1917 went to Montreal to spend 20 years with the Metcalf firm. He joined the Aluminum Co. staff in 1939 as an engineer in the Montreal office.

Fletcher W. Pearce, who holds degrees from the University of Michigan and the University of Texas, is now associate professor of civil engineering at North Carolina State College.

J. C. Moore is to continue his duties as superintendent of the War[illegible]ton, N. C. water department, as he h[illegible] been reappointed by the town commi[illegible]oners.

J. A. Rich is now constru[illegible]on superintendent for Gibbs & Hill, N[illegible] York contractors, on the $1,200,00[illegible] generating plant on the Neuse River ne[illegible] New Bern, N. C.

C. B. McNairy, construction engineer of Greensboro, N. C., who was recently in charge of construction at Fort Bragg for T. A. Loving & Co., Goldsboro, N. C., is now directing construction of a Marine Corps airbase in the Cherry Point section of Craven County, N. C.

C. W. Mengel, director of public works at Greensboro, N. C., is also serving as superintendent of streets until a successor is named for **Ray Warren,** who resigned last month to become executive director of the Greensboro Public Housing Authority.

H. G. Spencer, senior engineer of the bridge division of the Alabama State Highway Department, is now working with J. E. Sirrine & Co., contractors, as consultant engineer on the new army training center near Ozark, Ala.

J. S. A. Michaud has begun new duties as assistant engineer in the heating division, directorate of works and buildings, Royal Canadian Air Force, Ottawa. Mr. Michaud is a civil engineering graduate of the Ecole Polytechnique, Montreal.

J. E. Dussault, civil engineering graduate of Ecole Polytechnique of Montreal, is now resident engineer of the department of transport at Pointe aux Trembles, Quebec.

Jacques Leroux has begun new work as resident engineer in charge of construction at the Mont Joli aerodrome, Mont Joli, Que. Mr. Leroux graduated in civil engineering from Ecole Polytechnique, Montreal, in 1939.

Baxter L. Brown, from 1933 until this summer president of the board of public service of St. Louis, a position that requires general supervision of practically all construction work for the city of St. Louis, has returned to consulting work. From 1882 to 1905 Mr. Brown worked in various capacities, including chief engineer, for a proposed railroad to cross the Allegheny mountains. In 1905 he opened a consulting office in St. Louis and continued in that work until 1933, when he was made board president of public service.

Henry J. Johnson, engineering graduate of the University of Oklahoma and for eight years with the Skelly Oil Co. is

new city engineer at El Campo, Texas.

Lieut. William F. Merritt, U. S. Navy, has been transferred from New York to New Bern, N. C., to direct the field work on construction of a new marine air base on the Neuse River. **Lieut. Col. T. J. Cushman,** of the Marines, has also been transferred to New Bern to serve as liaison officer between the Navy and the Marine engineers on the $15,000,000 project.

Capt. Arthur C. Reade has begun new duties as constructing quartermaster at Camp Blanding, Fla. He replaces **Maj. James R. Rundell,** constructing quartermaster, since last December. Maj. Rundell is to report for duty as assistant to **Brig.-Gen. W. A. Danielson,** constructing quartermaster for the Panama Canal Zone.

E. C. DeGarmo, Fort Lauderdale, Fla., has been named assistant state highway engineer for the Florida State Highway Department. Mr. DeGarmo, division engineer at Fort Lauderdale for several years, will fill a new road department position. Another change in the Florida road department is the promotion of **Nathan S. Emery,** Fort Lauderdale, from assistant division engineer to Mr. DeGarmo's previous position.

WASHINGTON HIGHLIGHTS

INSTEAD OF SUPPLYING $300,000,000 as additional funds for the federal government's defense housing program, the House Public Buildings and Grounds Committee is investigating the whole housing program. An 11-man subcommittee is now on a two-weeks' trip to inspect the government projects. The investigators are looking for evidence of a poorly carried out program, particularly in the slum-clearance work.

Rumors are in Washington that USHA Administrator Nathan Straus and perhaps his boss, John M. Carmody, chief of the Federal Works Agency, may be relieved of their jobs. Carmody's rift with Defense Housing Coordinator Charles F. Palmer has not added to his popularity. The White House has backed Palmer and assured him he retains site-selection authority, which Carmody sought for the Federal Works Agency.

AS A RESULT of reports from the Russo-German front, the British Government has again asked the United States to step up sharply its program for production of tanks, which has been placed at the top of their list of requirements at the moment. Because of the British request, defense authorities are in the initial stages of a newly-enlarged plan for producing as soon as possible in this country 3,000 tanks monthly. Two thousand of that number would be medium tanks comparable with the units now being built by Chrysler. It is not expected that production on the new scale can be attained until the middle of 1942.

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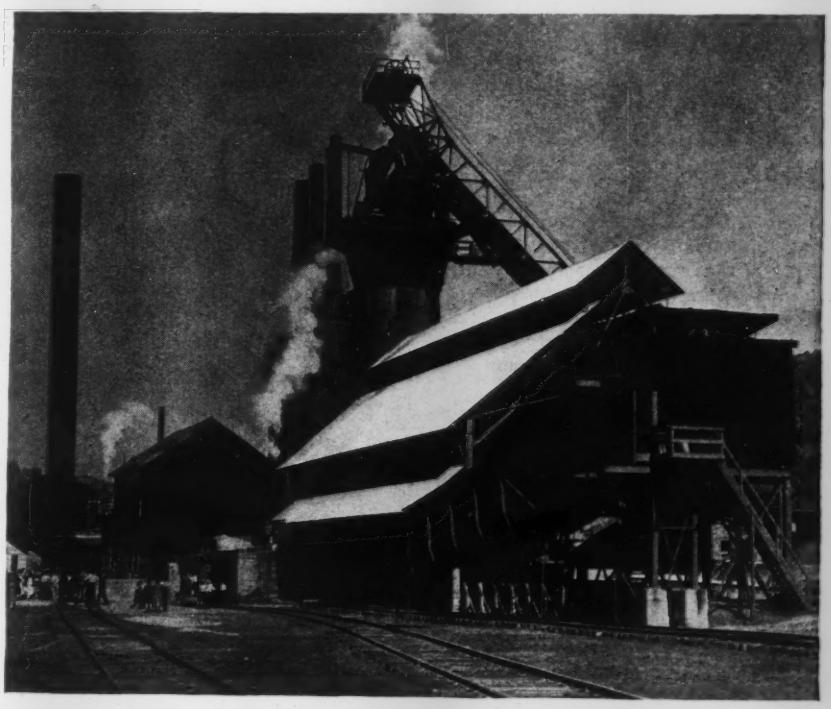
Canadian railway tunnel in service 50 years

The St. Clair River railway tunnel at Sarnia, Ont., which connects Sarnia with Port Huron, Mich., is still in use after 50 years of service. Believed to be the first international submarine tunnel, during the past 41 years the tube has been in continuous daily service for Canadian National trains travelling between Chicago and Montreal via Toronto. The tunnel proper is 6,000 ft. in length, while the approaches makes the overall length 11,725 ft.

Col. Harley Latson dies; Providence district head

Lt. Col. Harley Latson, 48, died Sept. 29 at Providence, R. I., where he was district engineer for the U. S. Army Engineers. Col. Latson graduated from the University of Southern California in 1917, and while overseas during the World War with the field artillery, was made captain and transferred to the U. S. Engineers. Following work at the Engineers School at Fort Belvoir, Va., in 1924, he became R.O.T.C. instructor at Oregon State College. In 1931 he was assigned as a student at Ft. Leavenworth, Staff School, after which he went to Memphis, Tenn., as assistant district engineer with the rank of major. From 1935 to 1940 he was stationed at Fort Lewis, Wash., in command of the Sixth Engineers and in February 1940 was sent to Providence as assistant to Lt. Col. J. S. Bragdon. He became district engineer when Col. Bragdon was transferred to Richmond, Va., in May of this year.



Cast iron pipe company expands pig iron capacity

Something was done about the pig iron shortage last week when the United States Pipe & Foundry Co., through its subsidiary, the Riddlesburg Coal & Iron Co., lighted a reconditioned blast furnace at Riddlesburg, Pa., about 35 miles southeast of Altoona. Shut down for several years, the blast furnace, as well as supplementary coal mines and coke ovens, was leased by the company from the Reconstruction Finance Corp. in order to secure a dependable supply of pig iron to enable continuous operation of its cast iron pipe and foundry plant at Burlington, N. J. Production is estimated at 6,000 tons per month, and employment will be given to about 325 persons in a community that has experienced depression for a long time. Officials at the United States Pipe & Foundry Co. and of the Riddlesburg Coal & Iron Co., and a large group interested in the iron and steel industry, were in attendance for the furnace-lighting ceremonies.

BRIEF NEWS

TRAFFIC LIGHTS in Pennsylvania must be revised to meet new regulations requiring that they be on standards (four on busy intersections) instead of suspended overhead. The new ruling is effective Jan. 1, 1942. In Philadelphia alone the change is estimated to cost $250,000. Highway Secretary I. Lamont Hughes of Pennsylvania reports that in some cases time extensions might be granted for the changes.

SO FAR, during 1941, five states have enacted legislation authorizing toll super-highways, following much the same pattern as that for the Pennsylvania Turnpike, the National Highway Users Conference, Washington, D. C., reports. The five states are: Florida, Illinois, Maine, Maryland and New York. These laws follow a general pattern of creating an independent authority with broad powers, except in the state of Maryland where the State Roads Commission is designated. The laws in general include eminent domain rights for the construction and operation of the turnpikes, which would be financed through the imposition of tolls. Bills for toll-road projects met defeat in Missouri, New Jersey, Oklahoma and Wisconsin.

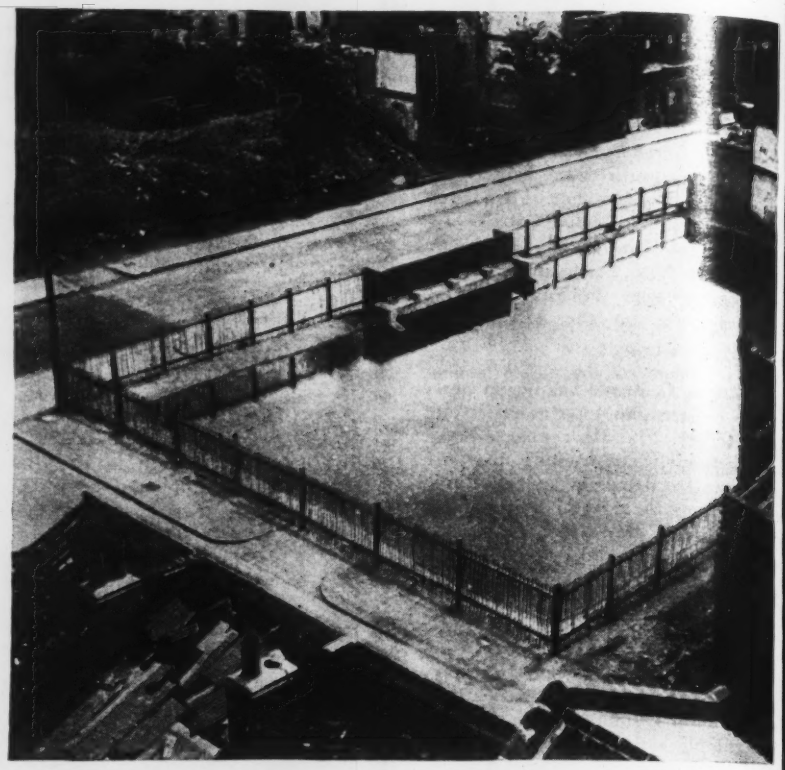
MODERNIZATION of the building code of the City of Milwaukee to circumvent current materials priority bottlenecks is being undertaken by Mayor Carl F. Zeidler of that city. He reported recently to the members of the Milwaukee Builders' Exchange Club that he intended to revive the Milwaukee building code committee, disbanded three years ago.

NORFOLK DAM, under construction in Baxter County, Ark., by the U. S. Engineers, has been given an A-3 priority rating, according to Major J. R. Crume, Jr., executive officer of the Little Rock district of the Army Engineers. Items considered critical are iron, steel and brass. Construction on the dam is about a week ahead of schedule.

A COMMITTEE, given power to act by the state legislature of Iowa, has approved plans for a new $1,428,000 Iowa state office building at Des Moines. The design, submitted by Burdette Higgins, Des Moines architect, calls for a five-story structure, which will be located east of the capitol building in that city.

MUNICIPALITIES in North Carolina which divert private water courses to obtain public water supplies can be held liable for damages to private property, the North Carolina Supreme Court ruled Sept. 24. In handing down the decision, the court upheld the action of a Vance County superior court in overruling demurrers filed by the City of Henderson in a suit brought by R. H. Pernell.

LATE LAST MONTH the Union Pacific R.R. placed in service on its Laramie, Wyo.-Ogden, Utah, route what is believed to be the largest locomotive in service in the United States. The unit develops 7,000 hp., weighs 596 tons and has an overall length of 133 ft. The locomotive was designed for a sustained speed of 70 mph. with a maximum speed of 100 mph. Costing $250,000, it is one of 20 such locomotives ordered by the U. P.



Wide World Photos

Londoners store water for fire fighting

In the event that air raids on London are renewed, many auxiliary water supplies for fire fighting purposes will be available. Two of the various methods of storage are shown by the photos above.

The top picture illustrates how a water tank was built in the basement of a bomb-wrecked building. Many tanks of this type are being constructed or have already been completed.

In many sections of the city tanks such as that shown by the lower photo are being built in the streets. The lower tank is of reinforced concrete, and its size can be gaged by the pedestrian at the left.

Maj. Gen. Reybold assumes command of the Corps of Engineers, U. S. Army

Major General Eugene Reybold takes over the office of Chief of Engineers, U. S. Army, this week, commanding the Corps of Engineers at a time when the already expanded work of this organization is scheduled for further extension to include the operations of the construction division of the Office of the Quartermaster General. He succeeds

Maj. Gen. Eugene Reybold

Major General Julian L. Schley, who finishes a four-year tour in the office and retires from active duty on Oct. 1.

General Reybold takes over command after a long engineering and military career that followed his graduation in civil engineering from the University of Delaware in 1903, when that institution was a small school known as Delaware College. Following five years of work as a civilian engineer with the U.S.E.D. (1903–1908) on river and harbor work, he received a second lieutenant's commission in the Coast Artillery in 1909. Promotion raised his rank to that of lieutenant-colonel in 1926 when he transferred to the Corps of Engineers. Previous work had included construction work with the Quartermaster interspersed with attendance and instructorship in the various service schools of the army.

In 1927 he was transferred to the Buffalo, N. Y. district serving as assistant to the district engineer, and was made district engineer at Sandusky, Ohio, in 1929, serving on the several engineering boards studying the St. Lawrence project during the next few years. Following a year in Washington, D. C. with the Board of Engineers, he served as district engineer in Wilmington (N.C.) and then at Memphis, Tenn. on Mississippi River control work. In the spring of 1937 he directed the flood defense operations from Cairo to the mouth of Arkansas River which were successful in controlling the record Mississippi River flood. From 1937 until his recent appointment he served as division engineer of the Southwestern Division, with headquarters at Little Rock, Ark., directing the extensive flood control work being carried out on the Arkansas, White and Red rivers.

Appointment of General Reybold breaks a long-established tradition that the Chief of Engineers be a graduate of the U. S. Military Academy.

He is a member of the American Society of Civil Engineers and received an honorary degree of doctor of engineering from the University of Delaware last week.

The retiring Chief of Engineers

Major General Schley, following his graduation from West Point in 1903, has served continuously in the Corps of Engineers beginning with duty in the Philippine Islands. He was attached to the Academy as instructor for several years, and his first position as district engineer was at New Orleans, 1913–1916. He has served as district engineer at Memphis and at Galveston, directing studies and recommendations for Mississippi River flood control. From 1928 to 1932 he was maintenance engineer

Maj. Gen. Julian L. Schley

on the Panama Canal and served as governor of the Panama Canal the following four years. Prior to becoming Chief of Engineers in 1937, General Schley had been in command of the Engineer School, U. S. Army. He is a member of the American Society of Civil Engineers.

British war building delayed for many reasons

Arbitrary procedure by English government departments, with divided responsibility and entire lack of coordination between departments vitally concerned, coupled with subversive action on the part of labor unions, are causes of serious interference in Great Britain's war construction program, according to reports of an English government committee on national expenditures, as abstracted in the Aug. 29 issue of *The Engineer*.

In a case reported in full a factory for manufacturing airplane parts was being built on a fixed fee basis and was to be completed in June, 1940 at a cost of about $627,000. The plant was to be operated by the company for the government, but with no profit. Progress was slow, and as in May it was evident that the work would not be completed on time, conference was held between the Director of Air Ministry Factories, the contractor and the architect, with a view to speeding up the work. At the very same time it was decided to double the size of the factory, increasing the contract price to about $1,092,000. The contractor was granted certain privileges as to overtime and Sunday work. However, delays continued and in February, 1941 the committee doubted whether complete production would be achieved for some months to come.

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Builders fight for record on "igloo" construction

Army contractors are establishing records for the construction of igloos or storage warehouses for explosives of the type described in these pages Sept. 18, 1941, p. 392, the War Department announced Sept. 25. The latest reports from the field to the Construction Division, Office of the Quartermaster General, reveal that the contractor at Umatilla, Ore., Ordnance Depot, has the lead with a record of 14 igloos constructed in one day and 74 in one week, an average of 10 4/7 igloos per day.

First claims to a record came from the Anniston, Ala. Ordnance Depot, where eight igloos were completed in one day, while the Fort Wingate, New Mexico Ordnance Depot contractor shortly afterwards announced the completion of nine igloos in a single day.

The friendly rivalry is seen as resulting in increased construction speed of the storage warehouses, which are built in the shape of a half-barrel with a floor 26½ ft. by 61 ft. The floor is built directly on the ground and the arched roof placed over it. The whole structure is then covered with sand or soil.

Texas legislature passes road bond assumption law

The Texas legislature, in special session, has passed a law providing for that state to continue paying principal and interest on bonds voted by Texas counties to construct roads which have become part of the state highway system. The special session, which was called for the specific purpose of providing for the continuance of this feature, was noteworthy in that the objective was attained in eleven days. The new law goes into effect immediately.

The regular session of the legislature, which convened in January, failed to make provisions for continuing the payment of the bonds, as a struggle developed over the distribution of a $2,500,000 surplus. In 1939 a surplus of $3,500,000 was donated to the counties. Under provisions of the new law just passed the surplus will be equally divided between the highway department and the counties. If a county has any right-of-way debts outstanding for roads taken into the highway system, it must first use its share of funds from the surplus for retiring such debts. After that, the county must retire its lateral road debt. Almost all counties owe money spent for one of these two purposes; the few that do not have such debts may use their share for new lateral road construction.

The surplus to the counties will be distributed according to a previous formula based one-tenth on the area of the county, two-tenths on population, three-tenths on motor vehicle registration, and four-tenths on lateral road mileage in that county.

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Work begun on huge Texas reclamation job

H. F. Bahmeier, engineer of the U. S. Bureau of Reclamation, has been transferred to San Benito, Texas, to perfect an organization for field studies and other investigations preparatory to starting construction of a $65,000,000 irrigation project in this area. Congress has appropriated $2,500,000 for purchasing right-of-way and other preliminary work. The entire construction program is expected to take five years and includes a concrete lined canal leading from the Rio Grande near Zapata parallel to the river for some 169 miles, and from two to four storage reservoirs. If but the two-reservoir system is built, water will be available for 583,000 acres, while two supplemental reservoirs would add 132,000 acres.

The first phase of the construction program is expected to start at an early date.

JOBS OF THE WEEK

ORDNANCE PLANT, Salt Lake City, Utah

Broderick & Gordon, Colorado Springs, Colo., will construct for the War Department an ordnance plant for manufacturing ammunition. Remington Arms Co., Inc., Bridgeport, Conn., will operate the plant, which is estimated to cost $17,769,597. Smith-Hinchman & Grylls, Detroit, Mich., and Royce J. Tipton, Denver, Colo., will design the work and supervise construction.

JAYHAWK ORDNANCE WORKS, Baxter Springs, Kan.

Freeto Construction Co., Pittsburg, Kan., and F. H. McGraw & Co., Hartford, Conn., will build for the War Department the Jayhawk Ordnance Works, which is to manufacture anhydrous ammonia and ammonia nitrate. Military Chemical Works, Inc., a subsidiary of Pittsburg & Midway Mining Co., Kansas City, Mo., will operate the plant. Estimated cost of construction is $10,193,600 with an additional expenditure of $6,513,100 estimated as necessary for equipment. Chemical Construction Corp., New York, N. Y., will design and supervise construction.

STEEL PLANT, Joliet, Ill.

American Steel & Wire Co., Chicago, Ill., awarded the contract for the excavation and substructure work for a large, one-story rod mill and a one-story, 1,500x960-ft. wire mill to Powers-Thompson Construction Co., Joliet, Ill. Construction expenditures are estimated at $2,000,000.

COPPER PLANT, Los Angeles, Calif.

Phelps Dodge Copper Products Corp., New York, N. Y., will construct by separate contracts a copper-products plant for the Navy Department, Washington, D. C. Estimated cost of land and buildings is $831,000, while equipment is expected to cost $2,269,000. Phelps Dodge Engineering Co., New York, is engineer for the work, which is financed by the Defense Plant Corp.

DEFENSE HOUSING, Baltimore, Md.

Caldwell-Wingate Co., New York, N. Y., has been awarded a $3,380,000 contract for a defense housing project for aircraft workers at Baltimore. Public Buildings Administration, Washington, D. C., is doing the work.

ROADS, Pennsylvania

Ralph Myers Construction Co., Salem, Ind., has been awarded a $1,115,258 contract for constructing the road and bridges on Route 73, Sec. B-4, in Butler County. The Baldwin Brothers Paving Co., Cleveland, Ohio, got a $664,141 contract for Route 750, Section 4, and Route 91, Section 11, in Cranberry, Pine Grove and Washington townships, Venango and Clarion counties. The Pennsylvania State Highway Department, Harrisburg, Pa., T. C. Frame, chief engineer, awarded the contracts.

HOUSING, Massillon, O.

Henry Dattner, Detroit, Mich., was awarded a $1,220,000 contract for 300 defense dwellings for industrial workers in the Massillon-Canton area. The work is being done by the Public Buildings Administration, Washington, D. C.

AIRPORT, Valdosta, Ga.

E. Jack Smith, Atlanta, Ga., was low bidder with a bid of $1,257,355 for the draining work, and paving of aprons, runways, and taxi strips at the Army Air Corps Advanced Training School when the U. S. Engineers, Washington, D. C., opened bids.

DEFENSE HOUSING, Curtis Bay-Fairfield, Md.

J. Slotnick Co., Boston, Mass., was awarded a $1,480,000 contract for constructing 500 housing units by the Baltimore Housing Authority. J. R. Edmunds, Baltimore, is architect for the project, which is carried out for the U. S. Housing Authority.

BASCULE BRIDGE, Chicago, Ill.

Mount Vernon Bridge Co., Mount Vernon, Ohio, was low bidder for constructing the superstructure for a double-leaf trunnion bascule bridge over the South Branch of the Chicago River at South Canal St. when the Chicago Department of Public Works took bids Sept. 24. The bid for a 5-in. steel floor was $847,019, while the alternate bid for a steel-grating floor was $859,434. Oscar E. Hewitt is commissioner of public works for the City of Chicago.

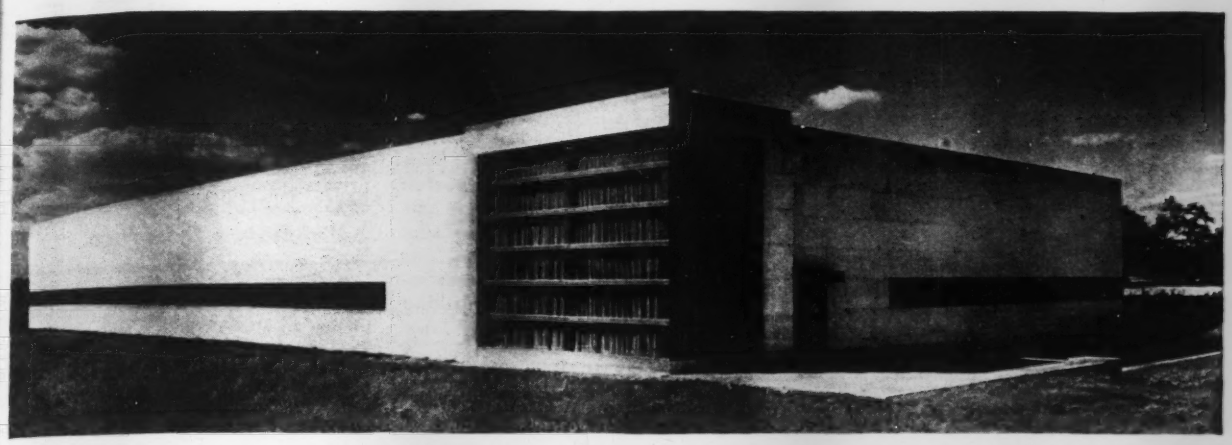
MAGNESIUM PLANT, Lake Charles, La.

M. W. Kellogg Co., New York, N. Y., will construct a 36,000,000-lb. annual capacity metallic magnesium plant for the Mathieson Alkali Works, New York. Total cost is estimated at $16,000,000. The Defense Plant Corp. will finance the project.

AIRCRAFT EQUIPMENT PLANT, Toledo, O.

Austin Co., Cleveland, Ohio, will build a plant for producing aircraft equipment for the War Department. Land and buildings are estimated to cost $982,000 and machinery and equipment $2,650,000 additional. The Defense Plant Corp. will finance the project.

NOTE—Additional bidding and contract news on over 800 projects large and small appear in the Construction News section beginning on page 19.



Marble walls enclose a modern factory

Most modern factories contrast sharply with the industrial buildings of a decade ago, but few have so completely thrown off suggestions of their ancestry as the new Ligature Laboratories of the Johnson & Johnson Co., New Brunswick, N. J., which was dedicated last week. Consider a check list of its features: steel frame of long span design; exterior walls of Vermont marble; terrazzo floors; interior walls of opaque structural glass in a variety of colors; stainless steel trim; air conditioning; fluorescent lighting; colored plumbing fixtures instead of the usual white; and last, and most surprising, a square-foot cost, exclusive of mechanical and electrical facilities, of only $1.28.

In the above view of one corner of the 100x190-ft. one-story building the massive corner window, framed in bronze, encloses the reception room, whose interior decoration the architects, R. G. and W. M. Cory, characterize as "residential". The other notable element of the picture is the narrow strip of plate glass which, without benefit of the usual window frame, is continuous around the three sides of the factory; the sheets of glass in this window are set top and bottom in stainless steel, but at the vertical joints are merely separated by a mastic filler. Special paint on the columns that occur immediately behind this window make them practically invisible from the outside.

One-third of the building is devoted to reception room, offices, dressing rooms, etc., and two-thirds is allocated to the processing of surgical gut, which includes gaging, drying, sterilizing and packing. Roof trusses permit division of the building into large bays, 37½x50 ft., and partitions are so arranged that there are only two columns in the entire work area. The overall height of the building is 24 ft., and the interior has a clear height of 15 ft. A notable feature of the floor is the use of a hollow terra cotta tile base as the duct system for the utility lines. Laid directly on grade, on a sand and cinder blanket, the tile supports a concrete fill and a terrazzo finish in which the joints are plastic rather than metal.

Located on a 250-acre tract that already contains two other Johnson & Johnson factories, the Ligature Laboratories fit into a modern scheme of industrial management being pioneered by Robert W. Johnson, chairman of the company, in which each department is given a building of its own instead of a corner in a huge industrial establishment, and in which the employee can be given working conditions in keeping with the dignity and importance of his job.

MEETINGS

FEDERATION OF SEWAGE WORKS ASSOCIATIONS, 2nd annual convention, Hotel Pennsylvania, New York, N. Y., Oct. 9–11, 1941.

FEDERATION OF ARCHITECTS, ENGINEERS, CHEMISTS & TECHNICIANS, 6th national convention, Detroit, Mich., Oct. 10–12.

AMERICAN PUBLIC HEALTH ASSOCIATION, Atlantic City, N. J., Oct. 13–17, 1941.

ASSOCIATED GENERAL CONTRACTORS, fall Board meeting, Book-Cadillac Hotel, Detroit, Mich., Oct. 13–15.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION, annual meeting, Stevens Hotel, Chicago, Ill., Oct. 14–16.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION, annual convention, The Greenbrier, White Sulphur Springs, W. Va., Oct. 14–17, 1941.

AMERICAN SOCIETY OF CIVIL ENGINEERS, fall meeting, Palmer House, Chicago, Ill., Oct. 15–17.

CANADIAN INSTITUTE OF SEWAGE & SANITATION, 8th annual convention, Walper House, Kitchener, Ont., Oct. 16–17.

AMERICAN WELDING SOCIETY, Bellevue-Stratford Hotel, Philadelphia, Oct. 19–24, 1941.

AMERICAN PUBLIC WORKS ASSOCIATION, 47th annual conference, Roosevelt Hotel, New Orleans, La., Oct. 26–29, 1941.

NATIONAL COUNCIL STATE BOARDS OF ENGINEERING EXAMINERS, Hotel Pennsylvania, New York, N. Y., Oct. 27–30.

INDUSTRIAL HYGIENE FOUNDATION, 6th annual meeting, Mellon Institute, Pittsburgh, Pa., Nov. 12–13.

REGIONAL AND LOCAL MEETINGS

ASSOCIATION OF WESTERN STATE ENGINEERS, 14th annual convention, Westward Ho Hotel, Phoenix, Ariz., Oct. 13–14.

NORTH DAKOTA WATER & SEWAGE WORKS CONFERENCE, 13th annual meeting, Jamestown, N. D., Oct. 13–15.

ILLINOIS MUNICIPAL LEAGUE, 28th annual convention, Congress Hotel, Chicago, Ill., Oct. 15–17.

AMERICAN WATER WORKS ASSOCIATION, Minnesota Section, Minneapolis, Oct. 9–11; New Jersey Section, Atlantic City, N. J., Oct. 16–18.

MISSOURI SOCIETY OF PROFESSIONAL ENGINEERS, annual meeting, Hotel Statler, St. Louis, Mo., Oct. 17–18.

WEST VIRGINIA SOCIETY OF PROFESSIONAL ENGINEERS, Bluefield, W. Va., Oct. 23–25.

NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS, annual meeting, Hotel Niagara, Niagara Falls, N. Y., Oct. 24–25.

WATER AND SEWAGE WORKS CONFERENCE, 7th annual meeting, Aberdeen, S. D., Oct. 28–29, 1941.

TEXAS SECTION, AM. SOC. OF C. E., fall meeting, Fort Worth, Oct. 31–Nov. 1.

OBITUARY

VOLNEY R. SEAWELL, from 1904 to 1928 assistant engineer of the city of Los Angeles and from 1929 to 1934 construction superintendent for Macco Construction Co., Clearwater, Calif., died Sept. 21 in Los Angeles. For several years Mr. Seawell had worked as an inspector for the board of education, City of Los Angeles. He had also acted as senior project engineer, chief of the inspection section, zone engineer, and manager for the WPA at Los Angeles, and as resident engineer inspector for the PWA.

EDGAR WHEDBEE, 63, a sanitary engineer employed in the waterworks department of the city of Dallas, Tex. for the last fifteen years, died last week in Bonham, Tex.

RICHARD MURDOCK, 51, a junior engineer in the bridge division of the Massachusetts department of public works, died at Boston Sept. 24.

MICHAEL J. COLLINS, formerly a contractor at Fall River, Mass., and for several years a member of the firm of the Beattie & Cornell Co., died at Fall River Sept. 24.

FRANK H. H. WILLIAMSON, controller of the National Parks Bureau of Canada, died in Ottawa Sept. 19. Mr. Williamson had served in the federal surveyor general's office and later in several branches of the Department of the Interior of Canada.

JOSEPH A. PARANT, 53, assistant to the chief engineer of the Boston & Maine R.R., died in Wolfeboro, N. H. Sept. 22. Mr. Parant joined the Boston & Maine in June 1906 to hold various positions with that railway. He was educated at Massachusetts Institute of Technology.

ROBERT CYRIL ALWIN, 56, manager for Colas Roads in Canada and Newfoundland, a firm engaged in highway construction, died Sept. 18 at Montreal, Que.

ALBERT W. MUNSELL, 64, a civil engineer who acted as chief engineer of concrete inspection for the Port of New York Authority on construction of the George Washington bridge and for the last five years chief engineer of inspection for Madigan & Hyland, New York consultants, died Sept. 23 in Teaneck, N. J. During the World War he worked at Ashville, Maine for the federal government on construction of concrete ships. He had also been employed on the Delaware river bridge, the Detroit river tunnel, and the Union Station in Washington, D. C.

SIR HERBERT S. HOLT, 85, Canadian railroad builder and financier, died at Montreal Sept. 28. His first railroad work was in Ontario on the Credit Valley R.R. and later in British Columbia on the Canadian Pacific Ry. Still later, as an independent contractor, he built stretches of Canadian Pacific in Quebec and New Brunswick. In 1908 he became president of the Royal Bank of Canada.

FRANK S. TAINTER, for many years associated with the New York consulting firm of Parsons, Brinckerhoff and Klapp, now Parsons, Klapp, Brinckerhoff & Douglas, died Sept. 25 in Far Hills, N. J. Mr. Tainter, who was a lieutenant colonel in the Engineer Corps, U. S. Army, during the World War, early in his career worked for the Delaware, Lackawanna & Western R.R. From 1892 to 1894 he was employed on sanitary work near Kingston, N. Y. and in 1894 went into private practice. Later he worked as vice president and chief civil engineer of the Hudson Engineering Co., New York.

ERNEST B. ROCKWELL, construction engineer employed on the Selma, Ala. airport project, died in a Selma hospital Sept. 23.

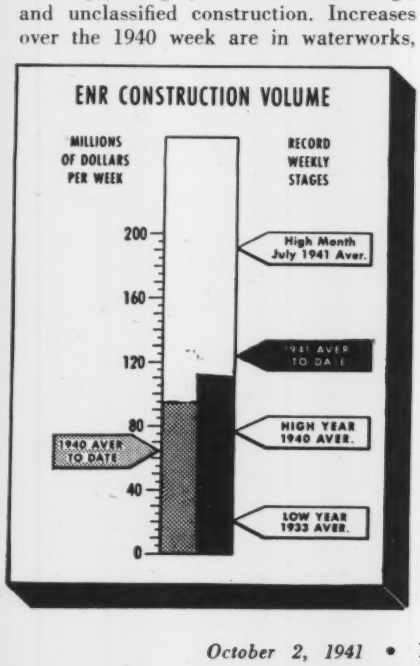
CONTRACTS AND CAPITAL

ENGINEERING CONSTRUCTION awards for the week, $111,706,000, are 19 percent higher than in the corresponding week last year, but are 32 percent lower than a week ago.

Public construction for the week tops a year ago by 49 percent and is responsible for the gain. Private construction is 45½ percent lower. Comparisons with a week ago reveal public construction 33 percent lower, and private awards off 26 percent.

The current week's volume brings 1941 construction to $4,955,584,000, an increase of 91 percent over the total for the 40-week period last year, and 24 percent higher than the volume for the entire 52 weeks of 1940. Private awards for the 40 weeks are 29 percent higher, and public construction is up 116 percent as a result of the 301 percent gain in federal work.

In the classified construction groups, gains over last week are in waterworks, sewerage, bridges, commercial buildings, and unclassified construction. Increases over the 1940 week are in waterworks, sewerage, commercial and public buildings, earthwork and drainage, and unclassified.



New capital for construction purposes for the week totals $30,143,000. This compares with $347,572,000 for the corresponding 1940 week. The current week's financing is made up of $15,118,000 in state and municipal bond sales, $8,000,000 in RFC loans for private industrial expansion, $5,450,000 in corporate security issues, and $1,575,000 in RFC loans for public improvements.

New construction financing for the year to date, $5,891,020,000, is 84 percent above the volume for the 40-week period last year.

CONTRACTS

(Thousands of dollars)

	Week Ending Oct. 3 1940	Sept. 25 1941	Oct. 2 1941
Federal	$39,036	$123,490	$72,018
State & Municipal	24,824	18,595	23,170
Total public	$63,860	$142,085	$95,188
Total private	30,321	22,359	16,518
TOTALS	$94,181	$164,444	$111,706
Cumulative 1941 (40 weeks)			$4,955,584
1940 (40 weeks)			$2,597,154

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	1940 40 weeks	Cumulative 1941 40 weeks
NON-FEDERAL	$1,192,292	$1,064,962
Corp. Securities	206,619	317,267
State & Mun.	385,613	359,400
U.S.H.A. loans	180,465	30,389
R.F.C. loans	195,595	94,336
R.E.A. loans	40,000	100,500
Federal Air—Hwy	184,000	163,000
FEDERAL	$2,002,747	$4,826,118
TOTAL CAPITAL	$3,195,039	$5,891,020

FHA MORTGAGES

	Week Ending Sept. 28 1940	Sept. 20 1941	Sept. 27 1941
Selected for appraisal	$28,797	$26,773	$24,858*
Cumulative 1941 (39 weeks)			$1,119,517*
1940 (39 weeks)			$986,355

*Subject to revision.

ENR INDEX NUMBERS

Index Base=100		1913	1926
Construction Cost	Sept. '41	263.12	126.48
Building Cost	Sept. '41	214.58	116.00
Volume	Aug. '41	434.00	190.00

CONTRACT UNIT PRICES

What contractors are bidding on different kinds of construction work

KESWICK DAM
CALIFORNIA

OWNER: Bureau of Reclamation, Sacramento, Calif.

PROJECT: Construction of first stage of Keswick Dam (Spec. 960.) including foundation and base of abutments, spillway, and powerhouse, and nearly complete construction of fish trap in center of dam. Dam is on Sacramento River, about 4 miles northwest of Redding, Calif., a portion of the Central Valley Project, California. Involves construction of 1⅓ miles of operating road between Quartz Hill Road and left abutment of dam, and excavation required for relocation of railroad at right end of dam. Relocation of railroad to permit construction of right abutment and powerhouse substructure. Foundation prepared by excavation to solid rock, faults and seams to be filled with concrete; and consolidating rock through low pressure shallow grouting. Concrete to be cooled by pumping river water through pipes embedded in concrete.

CONDITIONS: Contractor to furnish all form materials, wire, wire ties; temporary supports; welding or brazing rods; backfill materials; mineral aggregates for road surfacing; temporary shaft and cut-off-trench timbering; all water; rock and rock spalls; curing compounds; road surfacing materials; calking material; and all other materials not part of completed structure. Work to be completed in 500 calendar days. Rail and highway transportation facilities available. Wage rates are: skilled labor, 1.18¾ to $1.75 per hr.; semi-skilled, 75c. to $1.25; and common labor, 75 to 80c.

BIDS: Three bids were opened August 1, 1941, ranging from the contract low of $2,736,629 to $3,149,170.

LIST OF BIDDERS:

1. Guy F. Atkinson Co., and W. E. Kier Constr. Co., San Francisco, Calif. (contract) $2,736,629
2. Pacific Constructors, Inc., Los Angeles, Calif. 2,956,000
3. Macco Constr. Co., Heafey-Moore Co., Fredrickson & Watson Constr. Co., Oakland, Calif. 3,149,170

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Diversion, care of river, unwater found	L. S.	$50,000.00	$50,000.00	$200,000.00
2. Common excav. for dam, except rt. abut. above subgrade of relocated R. R., and in shafts for fault and seam cutoffs	110,000 c. y.	2.10	3.50	4.15
3. Rock excavation, as above	286,000 c. y.	2.10	3.50	4.15
4. Drill line holes for trench excav.	23,000 l. f.	.50	1.00	.50
5. Excav., all classes in shafts for fault and seam cutoffs	260 c. y.	40.00	25.00	25.00
6. Common excav. for R. R. relocation and rt. abut. above reloc. R. R. subgrade	286,000 c. y.	1.65	.90	.75
7. Rock excavation, as above	165,000 c. y.	1.65	.90	.75
8. Excavation, common, for road	32,000 c. y.	.50	1.50	.30
9. Excavation, rock, for road	8,000 c. y.	1.25	1.50	.30
10. Excav., common; road structures	200 c. y.	3.00	3.00	2.00
11. Excav., rock; road structures	50 c. y.	5.00	3.00	4.00
12. Backfill	5,700 c. y.	1.00	2.00	.75
13. Riprap	2,500 c. y.	1.50	1.00	1.50
14. Rubble-masonry walls	100 c. y.	25.00	30.00	14.00
15. Crusher-run base for rd. surf	3,900 c. y.	2.50	3.00	2.15
16. Watering road surfacing	126 M gal.	3.00	2.50	2.00
17. Apply liquid asph. prime coat	3,800 gal.	.03	.05	.10
18. Mineral aggregate for road-mix oil surf	1,300 c. y.	3.50	3.00	2.50
19. Apply liq. asphalt for road-mix oil surf	31,000 gal.	.03	.04	.02
20. Screenings for seal coat	110 c. y.	4.00	3.00	5.00
21. Apply liq. asph. emul. for seal coat	3,100 gal.	.03	.05	.10
22. Lay 24-in. corr. metal pipe	200 l. f.	1.00	1.15	.60
23. Lay 36-in. corr. metal pipe	50 l. f.	2.00	1.40	.90
24. Lay 48-in. corr. metal pipe	50 l. f.	3.00	2.00	1.20
25. Core drill 5½-in. holes to 30-ft.	240 l. f.	12.00	7.00	9.25
26. Drill 1¾-in. grout holes to 30-ft.	3,300 l. f.	3.00	1.50	1.55
27. As above, 30 to 50-ft. deep	500 l. f.	4.00	1.50	1.75
28. As above, 50 to 75-ft. deep	500 l. f.	5.00	1.50	2.00
29. Drill holes for setting foundations, drainage, and future grout. pipes	240 ea.	5.00	3.50	10.00
30. Place std. pipe and fittings for fndn. grouting and drainage	37,000 lb.	.12	.08	.15
31. Place metal tubing and fittings, for grouting contraction joints and fault and seam cutoffs	8,000 lb.	.15	.18	.20
32. Constr. anchorages for grout outlets in rock	50 ea.	5.00	6.00	5.00
33. Pressure grouting	5,000 c. f.	1.50	4.60	1.75
34. Pressure grouting with packers	4,000 c. f.	2.25	4.50	2.25
35. Constr. 6-in. split sewer pipe drains covered with gravel	50 l. f.	2.00	1.10	1.00
36. As above, 12-in.	210 l. f.	2.25	1.50	1.50
37. As above, laying 12-in., no gravel covering	1,500 l. f.	1.00	1.15	.60
38. As above, laying 24-in., no gravel covering	300 l. f.	1.50	1.50	1.50
39. Lay 6-in. sew. pipe, no gravel covering	140 l. f.	.75	1.10	1.00
40. Constr. 8-in. sew. pipe drain, embedded in gravel	800 l. f.	1.00	1.25	1.00
41. Drill holes for anchor bars and grouting bars in place	3,100 l. f.	1.50	.65	1.50
42. Concrete in dam	38,700 c. y.	8.78	6.00	7.50
43. Concrete in piers	5,400 c. y.	8.50	9.00	8.20
44. Concrete in spillway apron	7,700 c. y.	8.50	6.00	6.00
45. Conc. in left training wall	3,500 c. y.	10.00	11.00	9.00
46. Conc. to 24-in. thick in fish-trap sect	1,270 c. y.	36.00	38.00	23.00
47. As above, over 24-in. thick	18,500 c. y.	8.50	10.00	7.50
48. Conc. in powerhouse substruct.	18,000 c. y.	8.50	10.00	8.00
49. Lean conc. for reinf. bar protection	600 c. y.	11.00	12.00	14.00
50. Conc. in fault and seam cutoffs	260 c. y.	12.50	12.00	10.00
51. Concrete in road structures	25 c. y.	25.00	40.00	40.00
52. Place reinforcing bars	3,600,000 lb.	.018	.023	.02
53. Place metal tubing and fittings for conc. cooling systems	43,000 lb.	.20	.17	.10
54. Cooling concrete	45,000 c. y.	.30	.17	.40
55. Place metal seal. strips, without protect. strips	5,500 l. f.	.75	.92	.50
56. As above, with protect. strips	3,300 l. f.	1.00	1.15	.60
57. Construct asphalt seals	1,220 l. f.	3.00	2.00	1.00
58. Place tubular rubber seals	60 l. f.	1.00	2.75	1.00
59. Place elastic joint filler	3,700 s. f.	.20	.20	.50
60. Fabricate and install timber apurt	15 M bm.	150.00	100.00	100.00
61. Place stop-log and blkhd.-gate guides	79,000 lb.	.04	.10	.06
62. Inst. crane, hoists and fish sweep	40,000 lb.	.04	.10	.08
63. Lay track rails	1,600 lb.	.05	.05	.08
64. Inst. gates and gate hoists	61,000 lb.	.05	.05	.05
65. Inst. stairway, ladders, frames, guides	51,000 lb.	.25	.10	.10
66. Place metal floor plates, gratings, trashracks	4,000 lb.	.05	.06	.10
67. Inst. std. pipe, fittings, valves, to 6-in.	3,500 lb.	.20	.09	.12
68. As above, over 6-in.	60,000 lb.	.08	.07	.12
69. Construct pipe handrails	5,000 lb.	.30	.09	.20
70. Place 5-ft. steel pipe and 1,000-gal. fish tank	13,000 lb.	.04	.10	.05
71. Place anchor bolts for spillway gates	1,700 lb.	.25	.23	.10
72. Place electrical metal conduit	1,400 l. f.	.50	1.25	.50
73. Install electrical conductors	100 lb.	.50	.30	1.00
74. Inst. ground wires and ground rods	5,500 lb.	.25	.18	.50

EARTHWORK, PIPELINES
YAKIMA RIDGE CANAL, WASH.

OWNER: Bureau of Reclamation, Yakima Project, Roza Division, Wash.

PROJECT: Earthwork, pipelines and structures, Laterals 41.0 to 49.7, and sublaterals, Yakima Ridge Canal, located from four to nine miles northwest of Sunnyside, Wash., Roza Division, Yakima Project. Includes all common and rock excavation, backfill of pipe trenches and about structures, dry-rock paving, gate and metalwork installation, and furnishing and laying of standard and extra-strength concrete irrigation pipe.

CONDITIONS: Contractor to furnish concrete pipe, form materials, spikes, nails, wire, wire ties, all temporary supports, materials for dry-rock paving, backfill materials, water, and all other materials not part of completed structure required for completion. Work to be finished in 240 calendar days. Rail and highway transportation facilities available in vicinity

(Continued on following page).

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of project. Wage rates are: skilled labor, $1.00 to $1.75 per hr.; semi-skilled, 70¢ to $1.00; and common, 65¢.

BIDS: Five bids were opened September 12, 1941, ranging from the low of $55,110 to $83,550.

LIST OF BIDDERS:

1. David A. Richardson, Winthrop, Wash. $55,110
2. Natt McDougall Co., Portland, Ore. 61,373
3. Ray Schweitzer, Los Angeles, Calif. 61,997
4. Barnard-Curtiss Co., Minneapolis, Minn. 71,244
5. M. P. Munter, Seattle, Wash. 83,550

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Common excavation, for laterals	51,900 c. y.	$0.35	$0.27	$0.34
2. Rock excavation, for laterals	400 c. y.	.35	.75	.34
3. Overhaul	4,000 sta. c. y.	.05	.03	.04
4. Compacting embankments	2,700 c. y.	.30	.40	1.00
5. Common excavation, pipe trenches	6,300 c. y.	.40	.38	.40
6. Rock excavation, pipe trenches	60 c. y.	1.00	2.00	1.50
7. Excavation, common, for structures	850 c. y.	1.50	1.00	1.50
8. Rock excavation, for structures	70 c. y.	1.50	2.00	1.50
9. Backfill about structures	3,600 c. y.	.25	.20	.20
10. Puddling or tamping backfill about structures	3,600 c. y.	.35	.50	.50
11. Backfill of pipe trenches	6,900 c. y.	.20	.20	.13
12. Concrete in structures	605 c. y.	20.00	33.00	30.00
13. Place reinforcement bars	36,000 lb.	.02	.03	.04
14. Dry-rock paving	160 s. y.	1.00	2.50	1.75
15. Erect timber in structures	4 Mbm.	15.00	40.00	20.00
16. Install gate and misc. metalwork	12,000 lb.	.05	.05	.05
17. 6-in. std. conc. irrigation pipe	2,400 l. f.	.27	.30	.30
18. 8-in. std. conc. irrigation pipe	2,700 l. f.	.38	.40	.35
19. 10-in. std. conc. irrigation pipe	4,400 l. f.	.45	.52	.40
20. 12-in. std. conc. irrigation pipe	3,600 l. f.	.60	.66	.50
21. 15-in. std. conc. irrigation pipe	3,220 l. f.	.85	.90	.75
22. 18-in. std. conc. irrigation pipe	2,900 l. f.	1.10	1.24	1.00
23. 21-in. std. conc. irrigation pipe	190 l. f.	1.40	1.65	1.41
24. 6-in. extra-str. conc. irrig. pipe	125 l. f.	.50	.54	.53
25. 8-in. extra-str. conc. irrig. pipe	985 l. f.	.60	.65	.54
26. 10-in. extra-str. conc. irrig. pipe	510 l. f.	.65	.75	.62
27. 12-in. extra-str. conc. irrig. pipe	660 l. f.	.80	.92	.82
28. 15-in. extra str. conc. irrig. pipe	185 l. f.	1.20	1.35	1.25
29. 18-in. extra-str. conc. irrig. pipe	370 l. f.	1.50	1.67	1.41
30. 21-in. extra-str. conc. irrig. pipe	180 l. f.	1.75	2.03	2.00
31. 4-in. concrete sewer pipe	170 l. f.	.25	.29	.25

HIGHWAY AND BRIDGES
PENNSYLVANIA

OWNER: Pennsylvania State Highway Dept., Harrisburg; T. C. Frame, chief engr.

PROJECT: Construction of 22-ft. reinforced concrete pavement, structures and bridges, Legislative Route 212 in Bradford County, between North Towanda and Burlington Townships, Pa. Length of project 23,740 feet. Involves construction on one plate girder bridge with two 95-ft. spans; one plate girder bridge with two 97-ft. spans; one reinforced concrete arch extended, 20-ft. span; and three reinforced concrete boxes.

CONDITIONS: Contractor to furnish all materials and complete work in 350 calendar days. Highway transportation facilities available. Minimum wage rates are: skilled labor, 75c. per hr.; semi-skilled labor 50c.; and common, 45c.

BIDS: Seven bids were opened August 29, 1941, ranging from the contract low of $541,433 to $690,467.

LIST OF BIDDERS:

1. A. B. Cole, Meshoppen, Pa. (contract) $541,433
2. Central Pennsylvania Quarry, Stripping & Construction Co., Hazelton, Pa. 562,510
3. H. J. Williams Co., Inc., York, Pa. 593,602
4. Joseph Banks Constr. Co., Wilkes-Barre, Pa. 596,224
5. N. R. Corbisello, Binghamton, N. Y. 654,085
6. Putman & Greene, Inc., Fort Wayne, Ind. 663,447
7. M. Bennett & Sons, Indiana, Pa. 690,467

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Clearing and grubbing	L. S.	$5,000.00	$5,000.00	$15,000.00
2. Class 1 excavation	338,095 c. y.	.50	.50	.45
3. Class 2 excavation	6,347 c. y.	2.00	2.00	2.50
4. Borrow excavation	1,099 c. y.	.50	.30	.45
5. Subgrade	62,041 s. y.	.10	.12	.14
6. Shoulders	24,544 l. f.	.20	.20	.20
7. Native stone, type B, or cr. aggregate base course, 8-in	3,904 s. y.	.80	1.35	1.00
8. Plain cem. conc. pavmt., 6-in	92 s. y.	2.00	2.60	2.55
9. Cement concrete pavement, 9-in.	58,045 s. y.	2.50	2.60	2.75
10. Reinforcement in cem. conc. pavmt.	58,045 s. y.	.20	.20	.20
11. Cem. conc. wearing surf.; brdge. floors	944 s. y.	2.00		
12. Reinforcing in Item 11	944 s. y.	.20		
13. Bitum. surf. course HE-1, 2-in.	3,797 s. y.	1.00		
14. Class A concrete	641 c. y.	20.00		
15. Class B concrete	3,528 c. y.	18.00		
16. Plain steel bars	279,964 lb.	.05		
17. Fabricated structural steel	633,886 lb.	.08		
18. Stone backfill, structures	129 c. y.	3.00		
19. Stone backfill, misc. drainage	7 c. y.	3.00		
20. Cl. B cem. conc. slope wall (spillway)	14 c. y.	15.00		
21. Cl. B. cem. conc. pavmt., 6-in. (str. beds)	4 c. y.	15.00		
22. 15-in. cast iron pipe	68 l. f.	3.00		
23. Interlocking style c. i. pipe, 18-in.	86 l. f.	4.00		
24. 15-in. corr. metal pipe	290 l. f.	2.50		
25. 18-in. corr. metal pipe	60 l. f.	3.00		
26. 15-in. rein. cem. conc. pipe	800 l. f.	2.50		
27. 18-in. rein. cem. conc. pipe	356 l. f.	3.00		
28. 24-in. rein. cem. conc. pipe	514 l. f.	4.50		
29. 30-in. rein. cem. conc. pipe	62 l. f.	6.00		
30. 36-in. rein. cem. conc. pipe	284 l. f.	8.00		
31. Ext. str. rein. cem. conc. pipe, 36-in	238 l. f.	10.00		
32. 4-in. tile underdrain	5,000 l. f.	.80		
33. 6-in. tile foundation underdrain, type A.	3,484 l. f.	1.00		
34. 4-in. tile outlets	522 l. f.	.80		
35. Subgrade drains	4,500 l. f.	.30		
36. Plain cem. conc. gutter (segmental)	1,228 s. y.	3.00		
37. Type 1-B, 2-B, 3-B or 4-B guard fence	15,904 l. f.	.60		
38. Type 1, 2, 3 or 4 end anchorages	54 ea.	20.00		

UNDERPASS AND APPROACHES
NEW MEXICO

OWNER: New Mexico State Highway Department, Santa Fe; J. P. Church, Roswell, N. M., district engineer.

PROJECT: Construction underpass and approaches in DeBaca County, N. M., on U. S. Highway 60 between Fort Sumner and Clovis. Approximate length of underpass is 0.568 miles, and approach and roadway length is 2.839 miles. Involves all grading, minor drainage structures, base surfacing and concrete and steel railroad underpass.

CONDITIONS: Contractor to furnish all material and complete work in 250 weather working days. Rail and highway transportation facilities available. Wage rates specified as minimums are: skilled labor, 80c. to $1.50; semi-skilled, 60 to 80c.; and common, 45 to 55c.

BIDS: Four bids were opened September 5, 1941, ranging from the contract low of $99,809 to $124,785. Alternate was allowed of standard reinforced concrete culvert pipe or corrugated galvanized metal culvert pipe. Contract awarded on basis of latter.

LIST OF BIDDERS:

1. Henry Thygesen & Co., Albuquerque, N. M. (contract) $99,809
2. Davies & Sons, Albuquerque, N. M. ..... 112,19[illegible]
3. Cook & Ransom, Ottawa, Kan. ..... 116,96[illegible]
4. W. E. Bondurant, Roswell, N. M. ..... 124,78[illegible]

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Remove old drainage structures	L. S.	$10.00	$100.00	$20.00
2. Excavation, unclassified	107,000 c. y.	.16	.15	.27
3. Overhaul	165,000 sta. y.	.01	.03	.01
4. Haul	95,000 ¼-mi. y.	.03	.08	.06
5. Rolling	1,075 hr.	4.00	6.00	4.00
6. Base crse. surfacing, No. 1 aggregate	17,300 ton	.75	.70	.80
7. Base crse. surfacing, No. 2 aggregate	18,500 ton	.65	.60	.60
8. Cl. A conc.; curb, gutter, rundowns	36 c. y.	20.00	20.00	17.00
9. Watering	1,730 M gal.	1.50	2.00	1.50
10. Cl. A concrete, box culverts	173 c. y.	19.00	20.00	17.00
11. Reinforcing steel	21,800 lb.	.08	.07	.08
12. Structural steel	282,000 lb.	.08	.09	.10
13. 6-in. perf. corr. galv. met. culv. pipe	68 l. f.	1.00	2.00	1.00
14. Gate and cattleguard, 9-ft. roadway	4 ea.	400.00	600.00	300.00
15. Rein. conc. monument and marker	4 ea.	40.00	25.00	25.00
16. Galv. barbed wire fence	19,500 l. f.	.07	.10	.10
17. Gates, Texas type	5 ea.	5.00	10.00	5.00
18. Bracing	60 ea.	2.00	3.00	3.00
19. Rt.-of-way station markers	30 ea.	4.00	4.00	2.50
20. Remove and rebuild fence	10,000 l. f.	.04	.05	.05
21. Obliterating old road	0.4 mi.	50.00	100.00	200.00
22. Contour ditches	8,200 l. f.	.05	.10	.10
23. Railroad structure concrete	376 c. y.	23.00	20.00	17.00
24. Intermed. grade reinf. steel	25,000 lb.	.08	.07	.09
25. Membrane waterproofing	50 s. y.	3.00	2.00	2.25
26. Screened gravel fill	50 c. y.	2.00	4.00	2.00
27. Mechanical tamping	317 hr.	3.00	5.00	1.50
28. 24-in. corr. galv. met. culv. pipe	356 l. f.	3.00	3.00	3.00
29. 30-in. corr. galv. met. culv. pipe	192 l. f.	4.00	4.00	3.50
30. 24-in. rein. conc. culv. pipe (Alternate, Item 28)	356 l. f.	3.50	3.00	3.50
31. 30-in. rein. conc. culv. pipe (Alternate, Item 29)	192 l. f.	4.50	4.00	4.00

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

Location of ENR Correspondents

Symbols and Abbreviations Include:

†	Federal Government
★	Project of $500,000 or over
ENR	Engineering News-Record
CD	Engineering News-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply	Unclassified
Sewers, Waste Disposal	Latin America
Bridges, Grade Cross'gs	Public Buildings
Streets & Roads	Commercial Buildings
Earthwork, Waterways	Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: All low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

WATER SUPPLY

PROPOSED WORK

Ark., Hope—A. Graves, mayor, deep well, pump, and 500,000 gal. concrete reservoir. $65,575.

Ark., Jacksonville — Mayor, water supply and sewerage sys. $288,886.

†Calif., Fort Baker—Con. Q.M., Fort Mason, San Francisco, rejected bids Sept. 9, 8 in. water line, Fort Baker, Inv. W 6616-42-13. CD 9/16—ENR 9/18, under LB.

†Conn., New London—City, water supply facilities, Docket Conn. 6-126. $349,986. **DPW.**

Idaho, Fairfield—WW sys.. $25,000. R. L. Briggs, Robert Noble Bldg., Boise, engr.

Ill., Beecher City—$29,000 bond election Oct. 23, WW sys. WPA Warren & Van Pragg, Inc., 447-450 Standard Office Bldg., Decatur, consult. engrs. CD 8/27—ENR 9/4.

Ill., Wapella—Voted $30,000 bonds WW imprvs. $52,000. Warren & Van Pragg Inc., 447-450 Standard Office Bldg., Decatur, consult. engrs. CD 8/27—ENR 9/4.

Ill., Wilsonville—Voted $62,000 bonds WW imprvs. $215,000. Warren & Van Pragg, Inc., 447-450 Standard Office Bldg., Decatur, consult. engrs.

Ind., Jasper—I. T. Jacks, city supt., approved bond issue WW sys. imprvs. $104,000.

†Mo., Waynesville—City, WW facilities, Docket Mo. 23-109. $108,300. **DPW.**

O., Fairfield — Village, water softening plant. $25,000. R. T. Parrish, 127 Cambridge Ave., Dayton, engr.

O., Gahanna — Village, S. M. Hunzicker, mayor, WW imprvs. $92,000. Applied for WPA gr.

Ore., Eugene—Glenwood Water Dist. voted bonds, water and fire protection sys. to serve Glenwood Dist., near here. $48,000. CD 8/12—ENR 8/14.

Ore., Nyssa — Received no bids Sept. 22, tranite watermains, pumphouse, drilling well, etc. Will readvertise. CD 9/15.

Pa., Greenville—Boro Council and Greenville Water Co., Greenville, 1½ to 2 mi. c.i. watermains, appurtenances. $15,000-$20,000. E. Clark, boro engr. CD 9/12—ENR 9/18.

★†R. I., Newport—Newport Waterworks of City of Newport, 2 storage reservoirs, pump. plants, purification equip., 4 mi. water mains, Docket R. I. 37-101, for DPW. $940,000. Charles McGuire, 603 Turks Head Bldg., Providence, R. I., engr. CD 9/4—ENR 9/11.

†S. C., Beaufort—City, WW facilities, Docket S.C. 38-105. $56,365. **DPW.**

Tex., Alvin—E. C. Kimmons, mayor, WW sys. imprvs., extens. $35,000. Applied for DPW funds.

†Tex., Mineral Wells—City, C. Miller, mayor, dual watermain from Lake Mineral Wells to city and Camp Wolters, etc., Docket Tex. 41-155. $186,250. **DPW.** Freese & Nichols, Capps Bldg., Fort Worth, engrs. CD 9/23—ENR 9/25.

Tex., Pelly—C. H. Olive, mayor, water and sewer exten. (Tex. 41-261). $120,000. Applied for DPW funds. Garrett Eng. Co., 3504 Audobon St., Houston, engrs. CD 7/21—ENR 7/24, under Waterworks and Sewers.

†Tex., Weatherford—City, C. Russell, mayor, WW extens., imprvs., Docket Tex. 41-184. $29,350. **DPW.** S. M. Field, Weatherford, engr. CD 9/23—ENR 9/25.

Wash., Kelso—Making plans reconstructing filter plant, installing new intake and pump facilities, repairing reservoirs, expanding distr. sys., etc. $200,000. J. L. Henderson & R. G. Anderson, City Hall, Vancouver, engrs. CD 7/31—ENR 8/7.

Wash., Raymond—Pacific Co. Public Utility Dist., Raymond, WW sys., Lebam and Upper Willapa Valley $100,000, Monohon Road Dist. $6,000. J. D. Henry, c/o owner, engr.

BIDS ASKED

Bids Asked October 13

N. J., Skillman—Dpt. Institutes & Agencies, State House, Trenton, reconstructing water filter plant, State Hospital for Epileptics.

Bids Asked

Wis., Plymouth—Plymouth Electric & Water Utilities, 500,000 gal. rein.-con. reservoir. Over $15,000. Foth & Boyd, Columbus Bldg., Green Bay, engr.

LOW BIDDERS

Calif., San Diego—City, Sept. 23, strengthening San Dieguito Dam, from J. S. Metzger & Son, 3045 Gilroy St., Los Angeles. **$95,611.** CD 9/11.

Ill., Manteno—State, Springfield, water transmission line, Manteno State Hospital, from Santuci Constr. Co., Skokie. **$197,500.**

†Md., Hyattsville — Washington Suburban Sanitary Comn., Owens Ave., Sept. 10, steel water filtration plant, head house, wash water tank and reservoir, Contr. 131-W, from Chicago Bridge & Iron Co., 1700 Walnut St., Phila., Pa. **$255,200.** CD 8/28—ENR 9/4.

Pa., Phila.—Dpt. P. Wks., Bureau Water, City Hall Annex, raw water pump. mains, from J. N. Driscoll, 152 Apsley St. **$198,322.**

Wash., Seattle—City, County-City Bldg., Sept. 25, 3,806 ft., 20 in. pipe, E. Marginal Way watermain, from H. G. Purcell Co., Colman Bldg., Seattle. **$21,884.** CD 9/16—ENR 9/18.

Wis., LaCrosse—City, Sept. 9, iron removal plant, from Crane Co. of Minnesota, 356 Bway., St. Paul, Minn. **$14,835.** J. H. Barth, city engr. CD 9/5—ENR 3/27.

CONTRACTS AWARDED

†Calif., Campo—Con. Q.M., Camp Lockett, water supply sys., to Harry Friedman Contg. Engrs. Co., 2310½ W. Vernon Ave., Los Angeles. **$132,850.**

†Ill., Savanna — Con. Q.M., Savanna Ordnance Depot, water distr. and sewer sys. for hospital group recreational bldgs., Q.M. commissary bldg. and chapel, Savanna Ordnance Depot, to B. S. Andrus, P. O. Box 176, South St. Paul, Minn. **$18,804.**

Ia., Corning—Dam and reservoir with piping, own forces. **$45,000.** Henningson Eng. Co., Standard Oil Bldg., Omaha, Neb., engrs. CD 9/15—ENR 9/18.

Mass., Boston—Commonwealth of Massachusetts Metropolitan Dist. Comn., Water Div., 20 Somerset St., Boston, 5,300 lin. ft. 24 in. steel water pipes, to E. M. Matz, Inc., 101 Moraine St., Jamaica Plain, **$80,918.** Bids 9/18. CD 9/8—ENR 9/11.

N. J., East Orange—Sheeting, watermains, **WPA. $33,500.** W. Willegarod, Town Hall, WPA and town, engr.

N. J., Newark—Water Dpt., City Hall Annex, c.i. watermains, **WPA. $40,000.** W. Banks, City Hall Annex, WPA and city engr.

N. J., Short Hills—Commonwealth Water Co., 13 Beachwood Rd., Summit, 1½ m.g. concrete, steel reservoir, to H. L. Harrison & Sons, 1060 Broad St., Newark. **$75,000.** C. A. Woodhouse, 13 Beachwood Rd., Summit, engr. CD 8/22.

★Okla., Oklahoma City—Diversion works, canal, siphon and earthen dam for Bluff Creek Reservoir, own forces. Est. **$2,781,600.** Bids 8/12 rejected. CD 8/15—ENR 8/21 under LB.

Pa., Phila.—Dpt. P. Wks., Bureau Water, City Hall Annex, watermains, to Conduit Foundation Co., Commercial Trust Bldg. **$53,615.**

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Ariz., Tucson — Sewage treatment plant imprvs. $150,000. Headman, Ferguson & Carollo, 319 Home Builders Bldg., Phoenix, engr. Filed application with PWA.

Ark., Little Rock — Westover Hills Sewer Dist., sewerage sys. for 40 acre tract land near here.

Ark., Mt. Ida—Mayor, sewerage sys. $35,000. L. R. Plemmous, Hot Springs, engr.

Ark., Texarkana — Mayor, sewage disposal plant, pump. station, outfall lines. $216,000.

†Calif., Fresno—U. S. Eng., 208 Post Office Bldg., Sacramento, completing plans pump. plant for drainage water, etc., at Fresno Air Base, near here. CD 5/21—ENR 5/29 under Waterworks.

Calif., Lakewood Village—Directors Lakewood Village, Pub. Utility Dist., rejected bids Sept. 11, 60,000 lin. ft. sewers. CD 9/16—ENR 9/18, under LB.

Calif., Napa—Sewage disposal plant. Over $25,000.

Calif., Redwood City—Supervs. San Mateo Co., surveys to form 1,000 acre sanitary dist. to provide outfall sewer facilities for subdivision, San Bruno Area. Over $25,000.

Idaho, Pocatello—W. E. Gee, city clk., sewage disposal plant. $82,000. R. L. Briggs, Boise, engr.

†Ind., Kingsbury — Town, sewer facilities, Docket Ind. 12-114. $67,500. **DPW.**

★Kan., Kansas City—Storm and sanitary sewers. $528,000. Plan application to PWA. T. Schlup, city engr.

Miss., Hattiesburg — G. Calhoun, mayor, sewerage sys. exten. $25,000.

†Mo., Waynesville — City, sanitary sewer facilities, Docket Mo. 23-110. $169,000. **DPW.**

N. J., Bayonne—Sheating, manholes, catch basins, 6- to 15-in. tile sewers. $51,000. WPA. H. A. Jaeger, City Hall, WPA and city engr.

†N. J., Bellmawr—Federal Wks. Agency, 7 and D Sts. S.W., Wash., D. C., sheeting, sanitary sewers in various streets of defense housing. W. H. MacNamara, 101 N. 7 St., Camden, engr.

N. J., Jersey City — Hudson Co., Court House, 13,905 ft. 15 in. rein.-con. sewers, etc. $53,014. WPA. F. Radigan, Court House, owner's and WPA engr.

N. Y., Brooklyn—President Brooklyn Boro, Boro Hall, storm and sanitary sewers, Avenue Y, E. 3 St., Parkway Court, adjoining locations, $192,000; Whitney Ave., Avenue W, Plumb 1st St., Plumb 2nd St., $111,000.

N. Y., Kew Gardens — President Queens Boro, 120-55 Queens Blvd., Kew Gardens, combined sewers Jamaica Dist., 72 Ave., Parsons Blvd., 159, 160, 161 and 167 Sts., Union Turnpike, etc. Queens Boro $34,900.

N. Y., Kew Gardens — President Queens Boro, Boro Hall, 120-55 Queens Blvd., sanitary sewer Rockaway Blvd., Oregon Pl., Cranston St., 134, 135 and 136 Aves. $28,000.

N. Y., New York—President Bronx Boro, 851 Grand Concourse, combined sewers Calhoun, Lawton and Revere Aves. $47,400.

★N. Y., New York—President Bronx Boro, 851 Grand Concourse, sewer Bronx Park, from existing sewer in park at point opposite Melville St. to west side of Bronx Park east at Pelham Parkway north, storm water sewer in Bronx Park, opposite Melville St. to Devoe Ave. and Devoe Ave. to E. 177 St. $975,000.

O., Belle Center — Village sewage disposal plant. $25,000. J. E. Osborn, mayor.

O., Upper Arlington—W. T. Joseph, mayor, storm sewers, north of Lane Ave. $36,000. J. L. Mounts, Upper Arlington, city engr.

SEWERS, etc. (Proposed Work, Cont'd.)

Pa., Greenville—Boro Council, sewage disposal plant. Over $25,000. E. Clark, boro engr.

Pa., Jersey Shore—Boro Council, Boro Hall, by-pass sewer. $60,000.

Tex., Alvin—E. C. Kimmons, mayor, sewer lines, incinerator plant. $40,000. Applied for DPW funds.

†Tex., Brownwood—City, sanitary sewerage sys. and disposal plant addns., imprvs., Docket Tex. 41-117. $135,000. **DPW.**

Tex., Dumas—F. S. Mokey, mayor, sanitary sewer extens., disposal plant, etc. (Tex. 41-340). $56,500. Applied for DPW funds. W. D. Howren, 800 Florida St., Amarillo, engr.

Tex., Freeport—Wm. Allen, mayor, brick incinerator (Tex. 41-337). $69,000. Applied for DPW funds. H. G. Olmstead, P. O. Box 1016, Houston, engr.

†Tex., Mineral Wells—City, sanitary sewers, etc., $50,750. **DPW.** Freese & Nichols, Capps Bldg., Fort Worth, engrs.

Tex., Texarkana — Voted $125,000 bonds sanitary sewerage sys. imprvs. $315,000. J. Montgomery, Littlefield Bldg., Austin, and J. J. Rady, Majestic Bldg., Fort Worth, engrs. CD 8/4—ENR 8/7.

†Tex., Weatherford—City, C. Russell, mayor, sanitary sewerage sys. extens., imprvs., Docket Tex. 41-184, $29,350. **DPW.** S. M. Field, Weatherford, engr. CD 9/23—ENR 9/25.

Wash., Vancouver — Retained Stevens & Koon, engrs., Spalding Bldg., Portland, Ore., to make surveys sewerage sys. Over $200,000. J. L. Henderson, city engr.

Wis., Onaloska — Intercepting sewer from here to LaCrosse. Over $40,000.

BIDS ASKED

Bids Asked October 10

Wis., Hales Corners (P. O. R 4, West Allis) —Hales Corners Sanitary Dist. & Addn. 1. sewage treatment plant and pump. station. Mead, Ward & Hunt, 550 State St., Madison, engrs. CD 9/17—ENR 9/25.

Bids Asked October 14

†Wyo., Fort Francis E. Warren—Con. Q.M., additional facilities for sewage treatment plant; adv. ENR EBR 10/2.

Bids Asked October 20

Ill., Galesburg — Galesburg Sanitary Dist., sewage digesting tank, equip. Alvord, Burdick & Howson, 20 N. Wacker Dr., Chicago, engrs. CD 9/17—ENR 9/25.

Bids Asked October 22

N. Y., Ballston Spa—Bd. Trustees, at Village Office, outfall sewer, c.i. force main, sewage pump, etc. D. D. Hall, village clk. Solomon & Keis, 257 Bway., Troy, consult. engrs.; adv. ENR 10/2.

LOW BIDDERS

D. C., Wash. — District Comrs., District Bldg., Sept. 11, South Dakota Ave., sanitary trunk sewer Sect. 3, between Decatur and Emerson Sts., from Leo Butler Co., 8416 Georgia Ave., Silver Springs, Md. **$25,761.**

CONTRACTS AWARDED

Colo., Denver—City and Denver Co., storm sewers, from E. 14 Ave. and Jasmine St. to Locust St. and then to E. 6 Ave. and Olive St. etc. **WPA. $185,222.** A. K. Wickery, City and County Bldg., engr.

†Fla., Camp Blanding—Con. Q.M., sub-surface drainage sys., to Langston Constr. Co., Orlando. **$259,294.**

†Me., Houlton—U. S. Eng., Park Sq. Bldg., Boston, Mass., sewage disposal plant, Army Air Base, to Ley Constr. Co., 1215 Main St., Springfield, Mass. **$62,930.**

†Me., Presque Isle—U. S. Eng., Park Sq. Bldg., Boston, Mass., sewage disposal plant, airport, to Coughlan Constr. Co., Inc., 80 Federal St., Boston, Mass. **$43,507.**

Minn., Edina (Minneapolis P. O.)—B. B. Moore, village clk., 4605 Wooddale Ave., sanitary sewer exten., to U. Mariani, 548 Minnehaha Ave. E., St. Paul. **$36,000.** B. H. Bradley, 217 S. 6 St., Minneapolis, village engr. Bids 9/2.

N. J., Jersey City — Hudson Co., Court House, 2,300 ft. 72 in. C. M. sewer line. **WPA. $57,500.** F. Radigan, Court House, WPA and co. engr.

N. J., Newark — Sheeting, storm sewers, manholes. **WPA. $66,000.** J. Costello, City Hall, WPA and city engr. CD 8/29—ENR 9/4.

N. J., Stirling—Passaic Twp., Twp. Hall, completion sewage treatment plant. **WPA. $60,000.** C. Malstrom, Orange and N. 6 Sts., Newark, owner's and WPA engr.

N. Y., Kew Gardens — President Queens Boro, Boro Hall, 120-55 Queens Blvd., sanitary sewers, etc., 110 Rd. from 168 to 169 Sts. **WPA. $89,701.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

★**N. Y., New Dorp (sta. Staten Island)**—President Richmond Boro, Boro Hall, St. George, drainage, railroad street crossing elimination in New Dorp and Oakwood Sects. **WPA. $596,764.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., New York — President Manhattan Boro, Municipal Bldg., FTRC sewer, John St., Pearl St. to Front St. and Burling Slip, Front to South Sts. **WPA. $89,972.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

N. Y., Whitestone (sta. Flushing)—President Queens Boro, Boro Hall, 120-55 Queens Blvd., Kew Gardens, storm water drains, etc., 154 St. from 10 Ave. to East River. **WPA. $103,319.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

Pa., Phila.—Dpt. P. Wks., City Hall Annex, sewers Upsal St., to M. Masse, 3613 N. 8 St. **$38,640.**

S. C., Greenwood—Sewage disposal plant, to C. Y. Thomason, Greenwood. **$164,240.** Bids 9/19. CD 9/9—ENR 9/11.

BRIDGES, GRADE CROSSINGS

PROPOSED WORK

★**New York**—President Queens Boro, 120-55 Queens Blvd., Kew Gardens grade separation Merrick Blvd., construction in Springfield Blvd., $464,000; constructing 2 bridges to carry Springfield-Montauk Div. of Long Island R.R., over 225 St., $62,500; grade separation structure Queens Blvd., imprv. Main St., $105,000, all Queens Boro.

★**N. Y., Brooklyn**—Transit Comn., 270 Madison Ave., New York, and Bd. Transportation, 250 Hudson St., New York, East 105 St.-Canarsie elimination, $700,000; Atlantic Ave. elimination, Contr. 9, paving East New York ave. to Dunton St. $2,170,000; Atlantic Ave. Elimination, Contr. 8, trackage, East New York Ave. to Dunton St. $1,244,000.

N. Y., Glendale—Transit Comn., 270 Madison Ave., and Long Island R.R., Penna Sta., New York, C. E. Adams, ch. engr., 88 St. Glendale elimination, $335,000.

N. Y., Little Neck (sta. Flushing)—Transit Comn., 270 Madison Ave. and Long Island R.R., Penna Sta., New York, C. E. Adams, ch. engr., Little Neck Parkway elimination, $400,000.

★**N. Y., Long Island City**—Transit Comn., 270 Madison Ave., New York, and Long Island R.R., Penna Sta., New York, C. E. Adams, ch. engr., grade crossing elimination, $1,200,000.

★**N. Y., Maspeth (sta. Flushing)**—Transit Comn., 270 Madison Ave., New York, and Long Island R.R., Penna. Sta., New York, C. E. Adams, ch. engr., grade crossing eliminations. $2,000,000.

N. Y., New Dorp (sta. Staten Island)—Transit Comn., 270 Madison Ave., New York and Staten Island Rapid Transit Ry. Co., St. George, J. L. Maher, div. engr. soon lets contract, Grant City-New Dorp elimination, Contr. 1, grading, detour tracks, Grant City, Bay Terrace. $38,950.

★**N. Y., New York**—President Bronx Boro, 851 Grand Concourse, Unionport bridge over Westchester Creek, $1,720,000; Eastern Boulevard Bridge over Bronx River, $954,000.

N. Y., New York—President Manhattan Boro, Municipal Bldg., reconstructing Riverside Dr. viaduct from St. Clair Pl. to 135 St. $160,000.

N. Y., Rockaway—Transit Comn., 270 Madison Ave., New York, and Long Island R.R., Penna. Sta., New York, C. E. Adams, ch. engr., Rockaway elimination, Contr. 9, permanent hy. facilities, Sects. B and C, Hammell to Far Rockaway, $800,000; Rockaway elimination Contr. 8, electrical facilities, Sect. C, Hammell to city line, $115,000.

Oklahoma—State Hy. Dpt., Oklahoma City, bridge, State Hy. 11, between Choteau and Locust Grove, Mayes Co. $75,000. V. T. Moon, Oklahoma City, engr.

Pa., Dale (P.O. Johnstown)—Boro Council, Dale, $30,000 bond election Nov. 4, steel, concrete bridge over Solomon Creek, Annie Ave. $30,000.

R. I., Providence—C. F. McElroy, dir. P. Wks., rebuilding rein.-con., structural steel bridge over Woonasquatuck River, $100,000; rein.-con., steel bridge, Smith and Canal Sts. $110,000.

★**Tex., Port Isabel**—Cameron Co., c/o Judge, Brownsville, causeway connecting Pt. Isabel and Padre Island. $800,000. Revenue bonds will be issued to be retired from causeway tolls. A. Tamm, Harlingen, engr. CD 7/16—ENR 7/24.

Wash., Aberdeen—H. Horrocks, mayor, reconstructing E. Heron St. bridge. $100,000. Election Nov. 15, to vote special 2½ mill levy to finance same. CD 6/30—ENR 7/30.

†Wash., Boyds—Bureau Reclamation, Coulee Dam, bids soon raising Napoleon Bridge, 13 ft. over Kettle River, incl. 3 new concrete piers.

BIDS ASKED

Bids Asked October 7

Iowa—State Hy. Comn., Ames, 10 rein.-con. box culvert exten., FA 358-F1, Delaware Co.; 24 rein.-con. box culverts, pipes and extens., FA 764-A(1), Jasper Co. F. R. White, Ames, engr.

Kansas—State Hy. Dpt., Seneca, 35, 45, 35 ft. continuous slab span Bridge 15.6, FA519A, Nemaha Co.; 50, 80, 50 ft. continuous beam span Bridge 10.6, FA519A, Nemaha Co.; 65, 80, 65 ft. continuous steel beam span Bridge 30.6, FA524A, Pottawatomie Co.; 134 ft. steel I-beam Bridge 20.2, FA[illegible] Co. Hy. and Nemaha Counties. R. B. [illegible] hy engr.

Bids Asked October [illegible]

Kansas—State Hy. Dpt., at [illegible] Clerk Marion, Bridge 21.05, [illegible] continuous rein.-con. slab span, FAS [illegible] and Bridge 20.6 30-38-38-38-30 [illegible] continuous slab span, FA 370 G, both Mar[illegible] Co. R. B. Willis, Topeka, engr.

Minnesota—State Hy. Dpt., St. Paul, Bridge 5467, 3 span, 135 ft. concrete deck girder, S.P. 4006-12 (Trunk Hy. 60-60) [illegible] Le Sueur Co.; Bridge 6403, 50 ft. skewed concrete deck girder, S.P. 8711-[illegible] (TH 23-65) SN-FAP 445-B(1), Yellow Medicine Co. J. E. Ellison, ch. engr.

Bids Asked October 14

Louisiana—Dpt. Hys., Baton Rouge, Mathews Pontoon Bridge, approaches over Bayou Lafourche, 0.073 mi. Route C-2074, S.P. 16-01, Lafourche Parish; Amite-Tangipahoa River Bridge, bituminous surface treating 2.182 mi. Route 35, S.P. [illegible] Tangipahoa Parish.

LOW BIDDERS

California—C. H. Purcell, engr., State Hy. Dpt., Sacramento, Sept. 17, rein.-con. girder bridge, imprv. 0.4 mi. hy. San Luis Obispo Co. from D. Caputo, 985 Delmas Ave., San Jose, **$58,703.** CD 9/3.

†Calif., San Bruno—Con. Q.M., Fort Mason, Sept. 23, constructing Bridge 1, Golden Gate National Cemetery, Inv. 6616-42-15, from Carrico & Gautier, 365 Ocean Ave., San Francisco, **$79,697.** CD 9/11.

★**Ill., Chicago**—Dpt. P. Wks., 406 City Hall, Sept 24, superstructure Canal St. Bridge, from Mt. Vernon Bridge Co., Mt. Vernon, [illegible] 5 in. steel floor, **$847,019,** alternate, steel grating floor, **$859,434.** CD 9/2—ENR 9/4.

Iowa—State Hy. Comn., Ames, Sept. 23, 180x30 ft. continuous I-beam span bridge, imprv. 0.265 mi. hy. Plymouth Co., from Hoth && Olson, Inc., 622 Ins. Exchange Bldg., Sioux City, **$40,313;** 192 ft. concrete arch bridge, Fayette Co., from Welden Bros., Iowa Falls, **$54,326.** CD 9/12—ENR 9/18.

Louisiana—State Dpt. Hys., Baton Rouge, W. Prescott Foster, dir., Sept. 24, Keithville Overpass, of Southern Pacific R.R. S.P. [illegible] (Old 1864), Caddo Parish, from Pittsburgh-Des Moines Steel Co., 1015 Tuttle St., Des Moines, Ia., **$161,642.** CD 9/3—ENR 9/11.

Michigan—State Hy. Dpt., Escanaba, Sept. 24, furnishing, erecting structural steel for two 125 ft. anchor spans, two 125 ft. cantilever spans, one 50 ft. suspended center span bridge, Mackinac Co. from R. C. Mahon Co., 8650 W. Eliot St., Detroit, **$181,990.** CD 9/17.

★**Michigan**—State Hy. Dpt., Lansing, Sept. 24, bridge, Charlevoix Co., from W. J. Meagher & Sons, 17 and Water Sts., Bay City, **$588,474;** grade separation, Calhoun Co., from Walter Toebe & Co., Munising, **$63,879.** CD 9/17.

South Dakota—State Hy. Comn., Pierre, Sept. 23, bridges, FAP 455 B(1), Shannon Co., from Booth & Olson, Inc., 622 Insurance Exch. Bldg., Sioux City, Ia., **$59,647.** CD 9/30 under Roads.

Texas—D. C. Greer, engr., State Hy. Dpt., Austin, Sept. 23, reconstruct Pecos River bridge, 0.036 mi. Reeves and Ward Counties, from Austin Bridge Co., 1813 Clarence St., Dallas, **$29,745,** est. $27,409; constructing west fork Trinity River Bridge, 0.053 mi. Tarrant Co., from Wallace & Bowden, 5513½ E. Grand Ave., Dallas, **$42,286** est. $42,701. CD 9/25.

Texas—D. C. Greer, engr. State Hy. Dpt., Austin, Sept. 24, 6 drainage structures 0.347 mi. Gonzales Co., from P. & B. Constr. Co., 112½ W. 9 St., Fort Worth, **$151,581.** est. $148,603. CD 9/16; Big Creek and Denton Creek Bridges, 0.161 mi. Franklin Co., from Purvis & Bertram Constr. Co., 112½ W. 9 St., Fort Worth, **$65,270,** est. $75,197. CD 9/16 under Roads.

Virginia—State Dpt. Hys., Richmond, Sept. 23, bridges, Roanoke Co., from McDowell & Wood, Roanoke, **$55,458;** Albermarle Co. from R. W. Moore, Box 503, Staunton, **$47,613;** Brunswick and Nottoway Counties, from Bowers Constr. Co., 805 W. South St., Raleigh, N. C., **$66,449.** CD 9/11—ENR 9/18.

CONTRACTS AWARDED

Arizona—State Hy. Comn., Phoenix, reconstructing overpass near Morristown and approach fills, 2.1 mi. Maricopa Co., to Marich Constr. Co., 600 E. 20 St., Tucson, $157,251. Bids 9/22, awarded 9/23. CD 9/15—ENR 9/25.

Ind., Somerset—Comrs. Wabash Co., Court House, Wabash, steel, concrete bridge over Mississinewa River, to Yost Bros., R.R.1, Decatur, **$47,990.** Est. $50,000. Bids about 7/2. CD 6/18—ENR 6/26.

★**Michigan**—State Hy. Dpt., Lansing, 4,885 ft. causeway, north shore straits of Mackinac, Mackinac Co., to Johnson & Greene, Whitmore Lake, **$616,160.** Bids 8/20. CD 8/25—ENR 9/4.

†Mississippi—Pub. Roads Admin., 219 Old Post Office Bldg., Vicksburg, steel girder bridge, concrete floors and piers, surfacing approaches etc., 0.464 mi. Franklin and Wilkinson Counties, to W. G. Cook, Forest, **$79,838.** Est. $75,000. Bids 8/21. Awarded 9/15. CD 8/4—ENR 8/7.

N. J., Atlantic City—Atlantic Co., Court House, reconstructing bridges throughout

BRIDGES, etc. (Contracts Awarded, Cont'd.)

county, WPA, **$55,000.** G. R. Swinton, 930 Atlantic Ave., owner's and WPA engr.

N. Y., Great Kills (Sta. Staten Island)—Transit Comn., 270 Madison Ave., Staten Island Rapid Transit Ry. Co., St. George, J. L. Maher, div. engr., St. George, Albee Ave. Bridge-Great Kills-Huguenot elimination, to M. L. Klostergard, 4 Codington Ave., Dongan Hills, **$52,455.** Awarded 9/16.

★**N. Y., New Dorp (sta. Staten Island)**—Transit Comn., 270 Madison Ave., New York, and Staten Island Rapid Transit Ry. Co., St. George, J. L. Maher, div. engr., Grant City-New Dorp elimination and Oakwood Heights-Bay Terrace elimination, force account, **$1,262,050.**

STREETS AND ROADS

BIDS ASKED

Bids Asked October 6

Connecticut—**W. J. Cox,** comr. State Hy. Dpt., Hartford, rein.-con. paving 13,270 ft. sect. Route U.S. 5, Newington; 12,000 ft. Sandy Hook-Woodbury Rd., Route U.S. 6, Southington; 1,255 ft. sect. Route 5, Meriden; furnishing, del. 200,000 sq. yd. bar mat reinforcement, or fabric welded bar mat, or expanded metal mesh reinforcement, for concrete pavement on Hartford By-pass, Wethersfield, Hartford and East Hartford; drainage 950 ft. Whitney Ave. and rolled bank gravel 20,257 ft. 10 sections of road, Trumbull and Shelton; rolled bank gravel surfacing 4,050 ft. Upper Butcher Rd. and Pinnacle St., Ellington; 3,108 ft. Isleib St., Marlboro; 5,875 ft. sect. Mountain Rd., Redding; traffic bound gravel surfacing 6,900 ft. Old Colchester Turnpike, Montville.

Bids Asked October 6

N. J., Blackwood—Gloucester Twp., Twp. Hall, gravel surfacing 34,349 sq. yd. Turnerville-Erial Rd. J. C. Remington, Jr., 509 Cooper St., Camden, engr.

N. Y., Brooklyn—President Brooklyn Boro, permanent sheet asphalt paving Delmonico Pl., Prospect Pl., Putnam Ave., Amboy, Baltic, Bristol, Glen, Pulaski and Somers Sts.

Bids Asked October 7

Iowa—State Hy. Comn., Ames, grading, surfacing 4.339 mi. FSN 818, Boone Co.; 9.14 mi. FAS 754-A(1) N, Emmet Co.; grading, 1 culvert exten. FN 419-G, Clinton Co.; 4.373 mi. FSN 331-A(1), 6.101 mi. FSN 797, both Dallas Co.; second course surfacing 7 mi. FM-6, Page Co.; surfacing 6.651 mi. FSN 297-C, 4.216 mi. FSN 799, both Webster Co.; installing railroad signals on 11 grade crossings of Chicago Great Western R.R. F. R. White, Ames, engr.

Kansas—State Hy. Dpt., Seneca, grading, tacksloping 0.26 mi. FAS80A, Johnson Co.; grading 1.993 mi. FA 524 A, Pottawatomie Co.; 0.513 mi. FAGH 152C, Brown and Nemaha Counties; asphalt surface treating 0.513 mi. FAGH 152 C, Brown and Nemaha Counties, grading, culverts 6.291 mi. FA 519A, Nemaha Co.; light type surfacing 1.95 mi. FA 524 A, Pottawatomie Co. R. B. Wills, Topeka, hy. engr.

N. J., Haddon—FA-BC-1 bituminous concrete on stone macadam surfacing 2,787 sq. yd. Saginaw, Vesper, and Oneida Aves. W. H. MacNamara, 101 N. 7 St., Camden, engr.

N. Y., Kew Gardens—President Queens Boro, Boro Hall, 120-55 Queens Blvd., regulating sidewalk area, sidewalks, Jamaica Ave., regulating, grading outside and within paved area, etc. Hollis Court Blvd.

N. Y., New York—President Manhattan Boro, Municipal Bldg., widening, sheet asphalt paving portions East River Dr. from E. 101 St. to Point 200 ft north of E. 102 St.

O., Cincinnati—Widening, sheet asphalt repaving Plum St. from Central Parkway to 4 St. $78,000. H. H. Kranz, City Hall, engr.

West Virginia—State Road Comn., Charleston, asphaltic concrete on macadam surfacing, 3.39 mi. Secondary 33 and Primary 10, U.S. 60-Melissa Primary and Secondary Rd., S.P. 5231, 3- and 57-B(1) Cabell Co.; concrete paving 0.55 mi. U.S. Route 119, Stratton St., Logan, S.P. 3584-B, Logan Co.; asphaltic concrete leveling course and rock asphalt surfacing 4.1 mi. U.S. Routes 19, 21 and 52, Princeton Ave., Bluefield and Highland Aves., Spruce and Mercer Sts., Bluefield, S.P. 3630, 3631, 3632, 3633 and 284B, Mercer Co.; Horner Bridge S-1629, three 35 ft. concrete deck girder spans, concrete substructure, Federal Aid Secondary Project FAS 34-C, Lewis Co. D. McClaugherty, secy.

Wisconsin—State Hy. Comn., Madison, grading, concrete paving, etc., 0.174 mi. Ellsworth-Durand Rd., S.P. 6310, U.S. Hy. 10, Contr. 4, Pepin Co.; gravel traffic bound surface (base) course paving 24.803 mi. St. Croix Falls-Superior Rd., South Co. line-Manitou Falls Rd., S.P. 8719, Trunk Hy. 35, Contr. 1, Douglas Co.

Bids Asked October 9

Colorado—State Hy. Dpt., Denver, gravel surfacing 1.155 mi. FAP 118-A(3), Constr. Div. 1, S.H. 122, El Paso Co.; 10.64 mi. FAP 146-D(3), Constr. Div. 1, on S.H. 2, Moffat Co. C. D. Vail, State Office Bldg., Denver, engr.

Nebraska—State Dpt. Rd. & Irrigation, Lincoln, paving 0.2 mi. road, WPMS—FA 455; sand gravel surfacing 4.5 mi. No. 12 State Rd.; gravel surfacing Patrol Nos. 11038, 11053, 11054, 21001, 41045, 51008, 51011, 51020, 51038, 51040, 69021, 71004, 71006, 71015, 71016, 71017, 71018, 71022, 71023, 81011, 81012, 81016, 81019, 81045 and 82001.

Nevada—Directors Dpt. Hys., Carson City, grading, surfacing 4.8 mi. State Hy. System, Route 46, Sect. A, Elko Co. R. A. Allen, Carson City, state hy. engr.

Bids Asked October 10

Colorado—State Hy. Dpt., Denver, landscaping 18.797 mi. State Hy. 6 FA Projects 259-H(4) 259I(2) and 259-J(2), Div. 1, Chaffee, Gunnison and Saguache Counties. C. D. Vail, State Office Bldg., Denver, engr.

Kansas—State Hy. Comn. at office County Clk., Marion, grading 0.591 mi. FA 370 G; 0.428 mi. FAS 158 A, grading, light type surfacing 0.084 mi. K2072, all Marion Co. R. B. Wills, Topeka, engr.

Minnesota—State Hy. Dpt., St. Paul, grading, gravel surfacing, 7 box culverts 6.9 mi. S.P. 4708-02 and S.P. 7302-02 (Trunk Hy. 15-24) and S.P. 4711-06 (TH 24-24), FAP. 442 E(1) and 442 F(1); topsoiling, grading, concrete and gravel surfacing 1.2 mi. S.P. 6903-01 (TH 1-1602) and S.P. 6901-03 (TH 1-35) FAP 458 D(1) and S.P. 6913-01, (TH 35-35); grading, gravel lift, backfill, 4.9 mi. S.P. 6931-02 (TH 73-163); grading, concrete paving, gravel fill 0.7 mi. S.P. 6222-08 (TH 61-1); grading, stabilized gravel surfacing 1.1 mi. S.P. 7802-03 (TH 27-90).

Bids Asked October 1½

★**Oklahoma**—State Hy. Comn., S. Singleton, chn., Oklahoma City, grading, draining, graveling 4 mi. from Durham south, Roger Miles Co., $16,580; grading, draining, graveling, bridges on 9.2 mi. State Hy. 33, from Commerce to Custer City, Custer Co., $165,890; grading, draining, graveling, bridge on 5.85 mi. State Hy. 11, Grant Co., $131,300; grading, draining, paving 0.5 mi. and constructing Bear St. Bridge over North Canadian River on State Hy. 18, Shawnee, Pottawatomie Co., $207,000; base and armor coating (oil treatment) 5.86 mi. U.S. 60 from Arnett west to U.S. 283, $101,000; 6.09 mi. U.S. 60, Nowata Co., $60,000; 6.99 mi. State Hy. 37, McClain Co., $70,000; 5.9 mi. State Hys. 20 and 82, Mayes Co., $56,000; bituminous paving 6.3 mi. State Hy. 99, Osage Co., $37,800; overpass at Missouri-Pacific Ry., U. S. 69, Wagoner, Wagoner Co., $95,000.

Bids Asked October 15

California—C. H. Purcell, engr. State Hy. Dpt., P. Wks. Bldg., Sacramento, grading, plantmix on cement treated base surfacing 0.4 mi. hy. Kern Co.; grading, crusher run base surfacing 7.8 mi. hy. Santa Cruz Co.

Louisiana—State Dpt. Hys., Baton Rouge, bituminous surface treating 0.977 mi. Routes 754, 262 and 469, S.P. 913-04-38, Washington Parish.

Bids Asked October 16

California—State Hy. Dpt., 808 State Bldg., Los Angeles, grading, concrete paving 0.7 mi. Rosemead Blvd., Los Angeles Co. C. H. Purcell, 808 State Bldg., Los Angeles, engr.

Bids Asked

†**Calif., King City**—Con. Q.M., Camp San Luis Obispo, access road to target ranges in El Piojo section Hunter Leggett Military Reservation, near Jolon, Inv. 8.

Connecticut—W. J. Cox, comr. State Hy. Comn., Hartford, rejected bids Sept. 3, imprv. 20.257 ft. hy. Trumbull and Shelton. CD 9/8—ENR 9/11 under LB.

Ill., Marion—Rejected bids Sept. 15, imprv. 6,577 sq. yd. Sect. 6-CS. Will readvertise. G. H. Baker, Centennial Bldg., Springfield, state engr. co. roads and city streets. CD 9/9.

Minn., Faribault—Rice Co., rejected bids Sept. 5, imprv. 2.6 mi. State Rd. 11, Proj. 66-503-01, FAS 701A(2). CD 9/15—ENR 9/18.

Virginia—State Dpt. Hys., Richmond, rejected bids Sept. 23, imprv. 4.6 Mecklenburg Co.; 1.3 mi. hy. and 4 bridges Hanover and Henrico Counties. Will readvertise. CD 9/11—ENR 9/18.

LOW BIDDERS

Alabama — State Hy. Dpt., Montgomery, Sept. 19, imprv. 11.754 mi. Cleburne Co. and 4.71 mi. DeKalb Co., from R. H. Wright & Sons, Macon Rd., Columbus, Ga., **$340,730** and **$146,368** respectively. CD 9/10.

California—C. H. Purcell, engr. State Hy. Dpt., Sacramento, Sept. 17, imprv. 0.3 mi. Kern Co., from Griffith Co., L. A. Railway Bldg., Los Angeles, **$28,556**; 1 mi. Yolo Co., from A. Teichert & Son, Inc., 1846 37 Ave., Sacramento, **$66,905.** CD 9/3 under Bridges.

Calif., Oakland—City Council, Sept. 23, concrete surfacing, sewers, etc., 17, Lake and Jackson Sts., from L. J. Immel, Box 65, Sta. A, Berkeley. **$28,664.** CD 9/16, under Sewers.

D. C., Wash. — District Comrs., District Bldg., Aug. 15, bituminous on asphaltic base course surfacing, from Corson & Gruman Co., 33 and K Sts. N.W. **$116,455.**

Idaho, Twin Falls—Twin Falls Hy. Dist., Sept. 20, 27 mi. road surfacing and furnishing 5,000 tons stockpiling, from Hoops Constr. Co., Twin Falls. **$48,380.**

Ill., Chicago—Imprv. 0.5061 mi. Pershing Rd. 0808-CS, from John Dillon & Co., 2953 S. Halsted St. **$67,947.**

Ill., Danville—City, Sept. 16, imprv. 0.2964 Sect. 13-CS, from Danville Constr. Co., Box 223. **$34,840.**

Ill., East St. Louis—L. J. Dougherty, comr. Streets & Pub. Imprvts., City Hall, Sept. 19, imprv. Illinois Ave., Sect. 19 CS, State Aid Route 15, Ext. Sect. 177 MFT, from Concord Constr. Co., 3615 Olive St., St. Louis, Mo. **$102,332.** CD 9/16.

Iowa—State Hy. Comn., Ames, Sept. 23, imprv. 8.916 mi. Pottawatamie Co., from F. I. Braden, Red Oak, **$26,479;** 13.06 mi. Fremont Co., from Booth & Olson, Inc., 622 Ins. Exchange Bldg., Sioux City. **$73,528.** CD 9/12—ENR 9/18.

Louisiana—State Dpt. Hys., Baton Rouge, Sept. 24, imprv. 7.953 mi. Ascension and St. James Parishes, from E. A. Caldwell, 202 Whitney Bldg., New Orleans. **$89,905.** CD 9/3—ENR 9/11.

★**Michigan**—State Hy. Dpt., Lansing, Sept. 24, imprv. 1.478 mi. Bay Co., and 0.724 mi. Presque Isle Co., from Bridgeport Core Sand Co., 125 Davenport St., Saginaw, **$61,272** and **$31,972** respectively***8.874 mi. Calhoun Co., from Detroit Asphalt Paving Co., 702 Transportation Bldg., Detroit, **$104,069*****3.597 mi. Gladwin Co., from R. Kebbe, Warren, **$71,233*****1.367 mi. Lapeer Co., from Thomas Currie Co., 2531 Conner Ave., Detroit, **$105,357*****4.3 mi. Washtenaw Co., from Ann Arbor Constr. Co., 221 Felch St., Ann Arbor, **$54,156*****3.995 mi. Tuscola Co., from E. B. Schwaderer, Cass City, **$137,064*****2.541 mi. Saginaw Co., from Midland Contg. Co., 204 W. Main St., Midland, **$50,678*****0.533 mi. Oakland Co., from Frank J. Knight Co. 23845 Sherwood Ave., Center Line, **$52,906*****5.365 mi. Manistee Co., from C. M. Loomis, 415 Murray Bldg., Grand Rapids, **$233,908.** CD 9/17.

★**Minnesota**—State Hy. Dpt., St. Paul, Sept. 19, imprv. 7.7 mi. Proj. 1106-02 (Trunk Hy. 34-34) and S.P. 1107-01 (TH 34-34), and 2.1 mi. S.P. 6111-06 (TH 114-208), FAS 69 A(2), from W. Collins & Son, Moorhead, **$90,328** and **$34,593** respectively***6.4 mi. S.P. 4711-05 (TH 24-24), FAP 442 G(1) and 9.1 mi. S.P. 7201-11 (TH 5-121), FAP 587 A(2), from Farrell Contg. Co., 1607 Wynne St., St. Paul, **$46,388** and **$99,094** respectively*** 3.3 mi. S.P. 4804-01 (TH 27-27), S.P. 3304-05 (TH 56-110) and S.P. 4815-04 (TH 56-110), from Thomas Bros. & Haglund, Isle, **$34,678*****2.6 mi. S.P. 5305-02 (TH 60-85), FAP 523 I(1), from G. H. Lowe, 509½ 3 Ave. S.E., Cedar Rapids, Ia., **$33,139*****3.7 mi. S.P. 7102-13 (TH 10-3), SN-FAP 60(3), from A. T. Nolan, 18 N. 2 St., Minneapolis, **$42,767*****10.5 mi. S.P. 7506-01 (TH 59-144), from L. Joyce, Rochester, **$74,592*****0.4 mi. S.P. 0119-02 (TH 210-2), from Feven Constr. Co., 408 Atwater St., St. Paul, **$26,463.** CD 9/4—ENR 9/11.

★**Pennsylvania**—State Hy. Dpt., Harrisburg, Sept. 26, rein.-con. paving, 3 rein.-con. structures, 2 rein.-con. bridges, Schedule 3, 46,799 ft. Germany, Union, Mount Joy and Cumberland Twps., Littletown Boro, Adams Co., from Hempt Bros., RD 1, Camp Hill, **$679,639.** CD 9/9—ENR 9/11.

★**Pennsylvania** — State Hy. Dpt., Harrisburg, Sept. 26, imprv. 1,599 ft. Westmoreland Co., from A. Pantalone, 622 E. Pittsburgh St., Greensburg, **$60,183*****23,350 ft. Schuylkill Co., from J. Robert Bazley, Inc., Pottsville, **$416,653*****20,110 ft. Crawford Co., from Geo. S. Mellert-Weidner Co., Medina, O., **$223,854*****1,396 ft. Allegheny Co., from McShane Contg. Co., 100 Baldwin Rd., Pittsburgh, **$29,709*****15,779 ft. Chester Co., from H. W. Shaull & Son, Mechanicsburg, **$299,634*****14,698 ft. Wyoming Co., from Collins & Maxwell, Inc., Easton, **$170,830*** 5,997 ft. Armstrong Co., from N. B. Corbisello, 36 Tompkins St., Binghamton, N. Y., **$239,282.** CD 9/9—ENR 9/11.

★**South Dakota**—State Hy. Comn., Pierre, Sept. 23, imprv. 9.451 mi. Spink Co., from A. F. Jarvis Constr. Co., 410 Minnehaha Bldg., Sioux Falls, **$54,232*****15.283 mi. Shannon Co., from Bismarck Constr. Co., Bismarck, N. D., **$123,860*****7.526 mi. Pennington Co., from C. A. Wagner Constr. Co., 230 E. 8 St., Sioux Falls, **$61,819*****8.29 mi. Roberts Co., from W. P. Tieszen, Marion, **$69,297*****16.02 mi. Roberts Co., from W. H. Noel & Co., Jamestown, N. D., and Albert Lalonde Co., Sidney, Mont., **$168,157*****2.035 mi. Custer Co., from Chaulk & Birdsall, Rapid City, **$40,576*****5.234 mi. Pennington and Custer Counties, from N. W. Eng. Co., Rapid City, **$150,907*****9.377 mi. Hanson Co., from Dave Gustafson, 915 S. Spring St., Sioux Falls, **$38,740.** CD 9/10.

Texas—State Hy. Comn., Austin, Sept. 23, imprv. 12.662 mi. Scurry Co., from Thomas & Ratliff, Rogers, **$90,482** est. $115,109*** 17.144 mi. Wharton Co., from Wendel Constr. Co., El Campo, **$144,204** est. $117,179*****5.922 mi. Frio Co., from H. B. Zachry, Box 596, San Antonio, **$163,569** est. $174,000*****13.947 mi. Parker Co. and 7.155 mi. Fort Bend Co., from Harrison Eng. & Constr. Co., 903 Fairfax Bldg., Kansas City, Mo., **$354,936** and **$117,898** respectively, est. $361,955 and $94,948 respectively. CD 9/15.

★**Texas**—D. C. Greer, engr. State Hy. Dpt., Austin, Sept. 24, imprv. 3.958 mi. Brown Co., from Southern Contg. Co., 2525 Harris Blvd., Austin, **$72,930** est. $78,585***10.207 mi. Calhoun Co., from Heldenfels Bros., Rockport, **$169,284** est. $142,850*****4.561 mi. Chambers Co., from Holbrook & Graves, Dayton, **$72,082** est. $68,916*****2.636 mi. Franklin Co., from Armstrong & J. Davidson, 306 E. Knox St., Ennis, **$70,431** est. $67,113*****6.206 mi. Gonzales Co., from Cage Bros. and L. A. Turner, Bishop, **$121,612** est. $101,642*****2.177 mi. Galveston Co., from Harrison Eng. &

STREETS, etc. (Low Bidders, Cont'd.)

Constr. Co., 903 Fairfax Bldg., Kansas City, Mo., **$86,183** est. $78,839***13.95 mi. Hutchinson Co., from Bell & Braden, Herring Hotel Bldg., Amarillo, **$121,660** est. $140,974 ***6.003 mi. Mitchell Co., from J. W. Perry, 1235 W. Russell St., San Antonio, **$172,154** est. $155,250***12.893 mi. Nueces Co., from Cage Bros. & N. E. Williams, Bishop, **$377,-485** est. $415,538***3.211 mi. Rusk Co., from C. F. Gorman, Marshall, **$45,509** est. $44,893 ***2.604 mi. Tarrant Co., from D. H. Buchanan, 107 W. Downs St., Temple, **$68,357** est. $82,709***10.957 mi. Ward Co., from Cage Bros. & F. M. Reeves, Bishop, **$214,496** est. $223,058. Received no bids Sept. 24, imprv. 5.88 mi. Contr. 1, 5.076 mi. Contr. 2, both Ward Co. CD 9/16.

★**Virginia**—State Dpt. Hys., Richmond, Sept. 23, imprv. 7 mi. Pittsylvania Co., from McDowell & Wood, Roanoke, **$242,040*****1.2 mi. Norfolk Co., from W. H. Scott, Inc., Franklin, and Sam Finley, Inc., Roanoke, **$114,686*****1 mi. Wythe Co., from John A. Archer & Son, Wytheville, **$45,083*****1.2 mi. Tazewell Co., from Echols Bros., Staunton, **$84,421*****road Alleghany 47 Towana Rd. Co., from R. H. Rose, Westhampton Sta., Richmond, **$116,342*****9 mi. Frederick and Clarke Counties, from Echols Bros., Staunton, and Nelson H. Clark & Sons, Luray, **$147,309.** CD 9/11—ENR 9/18.

CONTRACTS AWARDED

Arizona—State Hy. Comn., Phoenix, imprv. 6 mi. Coconino Co., to Wallace & Wallace, P. O. Box 276, Glendale. **$90,770.** CD 9/16—ENR 8/28. Bids 9/22, awarded 9/23.

Ark., Fort Smith—R. P. Strozier, judge, Sebastian Co., Fort Smith, imprv. access roads to Camp Chaffee, near Bailing, **WPA. $89,148.**

★**†Calif., Vallejo** — Div. Defense Housing, FWA, 7 and D Sts. S.W., Wash., D. C., constructing roads, paths, sewer, water and gas sys., electric service, 2 pumphouses, tank and tower, etc., for 1692 housing units, Project 4086, to C. L. Harney, Call Bldg., San Francisco. **$1,076,313.**

Conn., Hartford—Bd. Contr. & Supply, 550 Main St., waterbound macadam paving Dart and Chandler Sts., Owner builds under supervision Engineering Department, City Hall. **$27,000.** R. Ross, City Hall, engr.

†Conn., Windsor Locks—U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., paving access roads and coal storage area, Windsor Locks Airfield, to John Mc Court Co., 910 Hunt Ave., and John P. Condon Corp., Coolidge Hill Rd., both Boston, Mass. **$28,000.** Awarded 9/8.

D. C., Wash.—Dist. Comrs., District Bldg., sheet asphalt widening, paving, repaving roadway U St. N.W. from 10 to 18 Sts., to Donaldson Paving Co., Inc., 20 Potomac Ave, S.W., **$140,486.** Bids 8/27, awarded 9/15.

★**Georgia**—State Hy. Dpt., Atlanta, imprv. 6.933 mi. Lincoln Co., to Claussen-Lawrence Constr. Co., Augusta, **$152,973*****4.535 mi. Liberty Co., to E. Jack Smith, Hurt Bldg., Atlanta, **$59,740*****6.668 mi. Hancock Co., to Lokey & Anderson, Thomson, **$149,842 *****5.088 mi. Franklin Co., to John Monaghan Inc., Pelham, **$50,416*****1.778 mi. Effingham Co., to J. G. Attaway Constr. Co., Statesboro, **$56,267 *** 7.575 mi. Decatur and Mitchell Counties, to J. B. Gibson, Donalsonville, **$90,567*****3.071 mi. Stewart Co., to M. C. Caddell, 2014 Dennis St., Jacksonville, Fla., **$45,-532.** Grand total $605,337. Bids 9/19. CD 9/9—ENR 9/11.

†Ga., Conley—Con. Q.M., 101 Marietta St. Bldg., Atlanta, grading warehouse area, Group E and classification yard, Atlanta General Depot, to E. M. Beckham, Perry. **$291,390.**

Ill., Peoria—Paving W. Forest Hill Ave. and Avalon Pl., to McElwee & Rogy, Inc., Peoria. **$37,314.** Bids 9/19. CD 9/10.

Ill., Rockford—W. H. Day, city engr., widening 11 St. and 15 Ave., to Ray Mann Constr. Co., 2230 7 Ave., **$41,581.**

Ind., Anderson — H. Gwinnup, city engr., paving. **WPA. $75,000.**

Kansas—State Hy. Dpt., at office Co. Clk., Kansas City, imprv. 0.871 mi. Wyandotte Co., to J. A. Tobin, 3700 Rainbow St., Kansas City, Kan. **$34,208.** Bids 9/10, awarded 9/22. CD 8/27—ENR 9/4.

Kansas—State Hy. Dpt. at office Co Clk., Lawrence, imprv. 0.538 mi. hy. Wyandotte Co., to J. A. Tobin, 3700 Rainbow St., Kansas City, Kan. **$43,528.** Bids 8/8, awarded 9/22. CD 7/23—ENR 7/31.

Kansas—State Hy. Dpt., at office Co. Clk., Norton, imprv. 6.513 mi. Norton Co., to H. J. Taylor Constr. Co., Salina, **$114,678.** Bids 9/19, awarded 9/22. CD 9/10.

Kan., Lawrence—J. W. Stone, city clk., concrete paving, to J. T. Constant, Lawrence, **$26,975.** B. Babb, city engr.

La., New Iberia—Mayor and Council, concrete paving Providence, Taylor, Hacker, Harriet, Front, Hopkins and LaSalle Sts., to Glassell-Taylor Co., 1417 Dalzell St., Shreveport. **$36,395.** Awarded 9/24.

Maine—State Hy. Comn., Augusta, imprv. 1.71 mi. hy. Gray, to W. H. Hinman, North Anson. **$42,455.** Bids 9/17. CD 9/12.

Mich., Battle Creek—Product, transport, lay and roll blacktop on 19 city streets, and city hall parking lot, to Detroit Asphalt Paving Co., 702 Transportation Bldg., Detroit. **$26,-789.**

Mississippi—State Hy. Comn., Jackson, imprv. 2.312 mi. Marchall Co., to F. S. Neely, Amory, **$25,168;** 19.763 mi. Warren and Yazoo Counties, to West Constr. Co., Riverside Dr., Chattanooga, Tenn. **$334,617.** Bids 9/23. Received no bids Sept. 9, imprv. 14,105 mi. hy. Greene Co., rejected bids Sept. 23, imprv. 4.339 mi. hy. Quitman Co. Will readvertise. CD 9/11 and 9/15.

Mont., Columbus—State Hy. Dpt., Helena, constructing, reconstructing 20 mi. hy. from Columbus to chrome mine site, **WPA. $125,-000.** H. W. Holmes, Helena, state hy. engr.

N. J., Jersey City—Hudson Co., Court House, grading, paving, roads, **WPA. $59,000.** F. Radigan, Court House, WPA and co. engr.

N. J., Montclair—Grading, 3 in. penetration on 6 in. concrete surfacing various streets, **WPA. $57,000.** J. B. Hayden, Town Hall, WPA and town engr.

N. J., Mount Holly—Burlington Co., Court House, 6 in. gravel shoulders, surface treatment, Brown Mills-S.H. Route 40, imprv. other roads. **WPA. $65,000.** W. D. Cougle, 1102 S. Broad St., Trenton, owner's and WPA engr.

N. J., Newark—Street Dpt., City Hall, grading, 3 in. penetration on 6 in. concrete surfacing, manholes, catch basins, **WPA. $75,000.** G. Andress, City Hall, WPA and city engr.

N. J., North Bergen—Grading, bituminous surfacing, curbs, walks, drainage, etc. **WPA. $55,000.** J. Muss, Town Hall, WPA and town engr.

N. J., West New York—Grading, resurfacing, imprv. streets. **WPA. $60,000.** C. Malstrom, Orange and N. 6 Sts., Newark, owner's and WPA engr.

New Mexico—State Hy. Dpt., Santa Fe., imprv. 10.875 mi. San Miguel Co., to Byrd-Evans Constr. Co., Elida, **$63,966** est. $70,000*** 12.137 mi. Colfax Co., to Martin & Cowart, Fort Sumner, **$226,665** est. $250,000. Bids 9/23. CD 9/15 and 9/16.

New York—Dpt. P. Wks., Municipal Bldg., New York, repaving, approach hy., Greenpoint Ave. Bridge over Newtown Creek, Brooklyn and Queens Boros. **WPA. $58,270.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

†N. Y., Fishers Island and **Port Clinton**—Con. Q.M., Fort H. G. Wright, Fishers Island, roads, drainage, cold storage, Fort H. G. Wright, Fishers Island, and Camp Perry, Port Clinton, to Distrow Constr. Co., Narragansett, R. I. **$93,990.**

N. Y., Kew Gardens—President Queens Boro, Boro Hall, 120-55 Queens Blvd., grading, curbing, New York Blvd. from Conduit Ave. to Springfield Blvd. **WPA. $60,805.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., New York—President Bronx Boro, 851 Grand Concourse, concrete road foundations, various locations, **WPA. $238,768.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

†N. Y., Rockaway Park—Con. Q.M., 120 Wall St., New York, rein.-con. hy., chain link fence, repairing railroad trackage, new rail road trackage, etc., Fort Tilden, **WPA. $216,-549.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

O., Cincinnati—Repaving, sewers, Wm. H. Taft Rd., to Crumley, Jones & Crumley Co., Blue Ash Rd., Blue Ash, **$55,881.** Est. $61,541. Bids 9/16, awarded 9/22. CD 9/9—ENR 9/11.

O., Zanesville—Concrete paving, sidewalks, etc. section Pershing Rd., **WPA. $50,000.** H. O. Church, city engr.

Okla., Oklahoma City—Grading, petroleum asphalt on gravel paving 39 blocks residential streets, to San-Ore Constr. Co., McPherson, Kan. **$126,077,** est. $135,000. Awarded 9/23. F. Cobb, Cotton Exch. Bldg., engr.

★**Pennsylvania**—State Hy. Dpt., Harrisburg, paving, 8 rein.-con. arches, 3 rein.-con. bridges, 50,897 ft. hy. Butler Co., to Ralph Myers Constr. Co., Salem, Ind., **$1,115,958;** imprv. 55,060 ft. Venango and Clarion Counties, to Baldwin Brothers Paving Co., 652 Union Commerce Bldg., Cleveland, O., **$664,-141.** Bids 9/12, awarded 9/22. CD 9/15—ENR 9/18 under LB.

Pa., Archbald—Boro Council, bituminous on stone surfacing streets, own forces. **$35,445.** Boro Eng. Dpt., c/o owner, engr.

Pa., DuPont—Boro, paving hy., own forces. **$25,000.**

Pa., Greenville—Boro Council, bituminous on stone surfacing streets, own forces. **$25,000.** E. Clark, boro engr.

†S. C., Fort Jackson—Con. Q.M., roads, to C. G. Fuller, Barnwell, **$49,200.** Bids 9/12, awarded 9/18.

Tenn., Nashville—Davidson Co., L. Hickman, judge, access road from McCrory Creek on Crouchville Pike to Lebanon Rd. **WPA. $59,150.**

Tex., Brenham — Imprv., paving streets. **WPA. $65,388.**

†Tex., Camp Wallace—Con. Q.M., 3½ mi. hard road surfacing, etc., to W. A. Kelso & Co., 2215½ Mechanic St., Galveston. Approx. **$68,291.** Bids 9/11. CD 9/5.

Tex., Dallas—Dallas Co., c/o Judge, asphalt paving Marsh Lane and Moxley St. and parkway center, **WPA. $123,006.**

Tex., Gainesville—R. P. Reag... city mgr., paving, grading, storm sewers, ... gutters, portions 60 streets, **WPA. $1...** O. J. J. Rady, Majestic Bldg., Fort Wo... engr.

†Vt., Fort Ethan Allen—Con. Q... construction roads, parking areas, Army C... ...onment, to Warren Bros. Roads Co., 38 ... rial Dr., Cambridge, Mass., **$46,970.**

Washington — Director Hy... Olympia, imprv. 107.1 mi. Grant, Lincoln ... Douglas Counties, to Washington Asph... Co., 316 W. 39 St., Seattle. **$56,288.** B... 9/3. CD 8/20—ENR 8/28.

Washington — Director Hy... Olympia, imprv. 5.35 mi. Lewis Co., to ... Harrison Bros. Co., 225 Wakefield Dr., Ta... **$63,351** ***6.193 mi. Chelan Co., to C... O'Neal, Ellensburg. **$134,110.** Bids 9/9. D 8/27.

West Virginia—State Road Com... Charleston, imprv. 2.167 mi. Greenbrier ... and 3.4 mi. Mason Co., to Murphy Constr. ... Morgantown, **$92,059** and **$111,656** respect... ly; 0.836 ***6.193 mi. Taylor Co., to Harmon Bros., Bedford, Pa., **$92,490.** Grand total $296,105. Bids 9/23. CD 9/11—ENR 9/18.

Wyo., Riverton—E. H. Steffy, city clk., street imprvs., exten. water and ... sanitary sewerage sys. **WPA. $90,000.**

EARTHWORK, WATERWAYS

PROPOSED WORK

†Calif., Mare Island—U. S. Eng., 461 Customhouse, San Francisco, rejected bids Sept. 17, 665,000 cu. yd. dredging in Mare Island Strait, Inv. 868-42-35. CD 9/24.

Conn., Darien—Town of Darien and Stamford, Bd. Selectmen, Town Hall, Darien, dredging, dam, retaining wall, Cove Pond. $50,000. Fay, Spofford & Thorndike, 11 Beacon St., Boston, Mass., engrs.

Illinois—State Dpt. P. Wks. & Bldgs., Div. Waterways, Monroe and Spring Sts., Springfield, channeling, dredging, marking, removing obstructions to navigation, constructing marine structures, appurtenant works, Fox River, for Illinois-Wisconsin state line to McHenry Dam, etc. $25,000; surveys series of dams in Des Plaines River, Cook Co., $50,000. C. Jenkins, Monroe and Spring Sts., Springfield, ch. engr. Waterways.

†Illinois—U. S. Eng., 816 U. S. Court House & Custom House, St. Louis, Mo., rebuilding, enlarging levees, etc. in Columbia Drainage & Levee Dist., Monroe Co., along left bank Mississippi River and along Fountain and Columbia Creeks., Inv. 1103-42-94.

†Neb., Homer—U. S. Eng., 1709 Jackson St., Omaha, nose protection structure at head proposed pilot canal, Missouri River, Omadi Bend. $27,000.

†Neb., Winnebago—U. S. Eng., 1709 Jackson St., Omaha, nose protection structure at head proposed pilot canal, Missouri River, Browers Bend. $18,500.

N. J., Highland Beach—State, State House, Trenton, imprv. stone bulkhead on approach to Fort Hancock. $150,000.

N. J., Long Branch—State, Bd. Commerce & Navigation, 1060 Broad St., Newark, bulkhead to prevent shore erosion in Elberon and West End sects. $200,000. C. W. Staniford, 1060 Broad St., Newark, engr.

N. J., Newark—Essex Co. Park Comn., 115 Clifton Ave., flood control various parks, excavating, clearing out, etc. $35,000. WPA. R. D. Crater, 115 Clifton Ave., owner's and WPA engr.

N. Y., New York—President Bronx Boro, 851 Grand Concourse, partial site, bulkhead and fill for Soundview Park. $420,000.

N. Y., Stapleton (Staten Island)—Dpt. Docks, Pier A, North River, New York, bulkhead wall, along bulkhead line, joining existing bulkhead walls, exten. sewers, foot Couse St., Foreign Trade Zone 1, Richmond Boro. $158,000.

★**Wash., Tacoma**—Preparing plans concrete arch type hydro-electric dam on Nisqually River, 50,000 kw. power plant, enlarging existing plant, concrete gravity diversion dam, 34 mi. transmission line, etc. $11,000,000. Bonds voted. R. D. O'Neill, Pub. Utilities Comr. J. V. Congwer, City Hall, ch. constr. engr. CD 3/27—ENR 4/3.

BIDS ASKED

Bids Asked October 6

N. Y., Marine Park—Comr. Parks, office Dpt. Parks, Arsenal Bldg., Central Park, 64 St. and 5 Ave., New York, steel bulkhead, beginning Fairlawn Ave., concrete bridge, etc. Contr. R-16-241, Richmond Boro.

N. Y., Tarrytown—Bd. Trustees, Municipal Bldg., 21 Wilday St., bulkhead in Hudson River, south of Tarrytown Boat Club. J. R. Lasee, village engr.

Bids Asked October 14

†Illinois—U. S. Eng., 816 Court & Custom House, St. Louis, Mo., placing about 1,960,000 cu. yd. earthwork in rebuilding and enlarging 11 mi. levees in Columbia Drainage & Levee Dist., Monroe Co., on Miss. R., incl. 8 gravity drainage structures.; adv. ENR 10/2.

Mass., Tisbury—Commonwealth Mass., Dpt. P. Wks., H. L. MacDonald, comr., 100 Nashua

EARTHWORK, etc. (Bids Asked, Cont'd.)

St., Boston, excavating channel from Vineyard Sound to Tashmoo Pond, constructing stone jetty. $15,000.

Bids Asked October 17

†**Florida**—U. S. Eng., Jacksonville, maintenance dredging, 2,609,000 cu. yd. shoal material, Jacksonville to ocean; St. Johns River, Fla., adv. ENR 10/2.

Bids Asked October 20

†**Colorado**—Bureau Reclamation, Customhouse, Denver, constructing Granby Dam and dikes, Colorado-Big Thompson Project. Spec. 979. Bids 9/8. Rejected. CD 9/10—ENR 9/18.

†**Colorado**—Bureau Reclamation, Customhouse, Denver, diversion and outlet tunnel, Granby Dam, Colorado-Big Thompson Project, Spec. 999.

Bids Asked October 21

†**Washington**—Bureau Reclamation, Coulee Dam, earthwork, structures, surfacing, relocating Stevens and Ferry County roads, Columbia River Reservoir, Columbia Basin Project, Spec. 996, near Boyds.

Bids Asked October 22

†**Md., Hyattsville**—Washington Suburban Sanitary Comn., H. R. Hall, ch. engr., Owens Ave., constructing Brighton Dam and 1.1 mi. gravel approach roadway on Patuxent River, about 20 mi. north of Wash., D. C. Ambursen Eng. Corp., 295 Madison Ave., New York, N. Y., consult. engrs.; adv. ENR 10/2.

Bids Asked October 23

Miss., Hernando—Lake Cormornent Drainage Dist., Hernando, 77,000 cu. yd. drainage channels. Morgan Eng. Co., 610 Goodwin Ins. Bldg., Memphis, Tenn., engrs.

†**Washington**—Bureau Reclamation, Yakima, earthwork, concrete lining, structures. Station 2884 plus 50 to Station 3353 plus 17.60, Yakima Ridge Canal, Roaz Div., Yakima Project, Spec. 997, near Sunnyside.

Bids Asked October 27

†**Arizona-California-Nevada**—Bureau Reclamation, Federal Bldg., Yuma, Ariz., earthwork, concrete lining, structures, Station 4562 plus 67 to Station 5726 plus 83, Coachella Canal, Boulder Canyon Project, Spec. 995.

LOW BIDDERS

†**California**—U. S. Eng., 208 Post Office Bldg., Sacramento, Sept. 17, enlarging, raising, strengthening, setting back 21,000 ft. existing levee along north levee Cache Creek, 132,000 cu. yd. excav., in Knights Landing, Yolo Co., Inv. 1105-42-26, from C. W. Wood & W. C. Watson, Box 599, Lodi, **$38,645.** Est. $30,006. CD 9/11—ENR 9/18.

†**California**—Bureau Reclamation, Old Post Office Bldg., Sacramento, Sept. 22, earthwork, concrete lining, structures, Contra Costa Canal, Delta Div., Central Valley Project, near Hookston, Spec. 987, from Trewitt-Shields & Fisher, 1501 Pacific Northwest Bldg., Fresno. **$319,862.** CD 8/27—ENR 9/4.

★†**California**—U. S. Eng., 208 Postoffice Bldg., Sacramento, Sept. 25, enlarging, raising, strengthening levees, constructing Schedule A, 48,200 lin. ft. East Levee, Sutter By-Pass from junction with west levee of Feather River north 9.4 mi., Schedule B, 35,300 lin. ft. same levee from 2.4 mi. below mouth Wadsworth Canal to Sutter Buttes, Schedule C, 48,500 lin. ft. East and West levees, Wadsworth Canal from its mouth to intercepting canal, from H. E. Parker, 1112 G. St., Marysville. **$655,654.** Est. $636,830. CD 9/2.

†**District Columbia and Virginia**—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., Sept. 16, dredging, disposing 220,000 cu. yd. material from Washington Harbor, D. C., and 102,000 cu. yd. from Potomac River, Alexandria, Va., from Gahagan Constr. Corp., 147 Remsen St., Brooklyn, N. Y., **$99,000.** CD 9/2—ENR 9/4.

†**Iowa**—U. S. Eng., 1709 Jackson St., Omaha, Neb., Sept. 23, 6,190 ft. dikes and 6,592 ft. revetment in Missouri River between Louisville and Blair Bends, 7 mi. downstream from River Sioux, from J. J. Connor Constr. Co., 419 City Bank Bldg., Kansas City, Mo. **$169,703.** Est. **$285,192.** CD 9/10—ENR 9/18.

†**Michigan**—U. S. Eng., 613 Federal Bldg., Detroit, Sept. 19, removing, disposing 3,500 lin.ft. plank revetment, also 1,125,000 cu.yd., place measure, of material other than ledge rock from Saginaw River between Saginaw and Bay City, from Duluth Superior Dredging Co., foot of 45 Ave. W., Duluth, Minn., **$218,250.** CD 8/26—ENR 8/28.

†**Oregon**—U. S. Eng., 628 Pittock Blk., Portland, Sept. 23, lengthening, strengthening levee, Inv. 698-42-145, from Eldon & Dennis, 411 N.E. 22 St., Portland, **$25,268.** Est. $30,342. CD 9/16.

★†**Oregon**—U. S. Eng., Pittock Blk., Portland, Sept. 26, dredging, disposing 2,353,000 cu. yd. material, furnishing, placing 28,600 cu. yd. rip rap to complete forebay and tailrace, Bonneville powerhouse, Inv. 698-42-32, from General Constr. Co., 3840 Iowa St., Seattle, Wash. **$1,494,195.** Est. $2,463,550. CD 9/4—ENR 9/11.

★**South Carolina**—South Carolina Pub. Serv. Auth., Charleston, Sept. 23, finish of structures, lighting and miscellaneous structures, Sched. 1, from Atlantic States Constr. Co., c/o Atlanta Tile & Marble Co., Inc., 319 Luckie St. N.W., Atlanta, Ga., **$119,907*****Sched. 2, from Howard P. Foley Co., Inc., 27 Cumberland St., Charleston, **$86,500*****Sched. 3, from H. B. Nelson Constr. Co., Red Rock Bldg., Atlanta, Ga., **$228,910*****installing electric transmission line from Pinopolis power plant to Bowman, from Midland Constructors, Inc., 205 W. Wacker Dr., Chicago, Ill. **$320,021.** CD 9/4—ENR 9/11 and 9/25.

CONTRACTS AWARDED

†**Arkansas**—U. S. Eng., P. O. Box 97, Memphis, Tenn., 1,558,000 cu. yd. earthwork in White River Levee Dist. (White River Back water Levee), to H. N. Rodgers & Sons Co., 62 S. Front St., Memphis, Tenn. **$371,894.** Bids 9/9, awarded 9/13. CD 8/29—ENR 9/4.

Mass., Salem—Commonwealth of Massachusetts, Dpt. P. Wks., H. L. MacDonald, comr., 100 Nashua St., Boston, dredging 58,500 cu.yd. material, Diois Boat Yard, Salem Harbor, to J. S. Packard Dredging Co., 1 Court St., Boston, **$31,030.** Bids 9/16. CD 8/29—ENR 9/4.

†**Missouri**—U. S. Eng., 601 Davidson Bldg., Kansas City, Mo., 4,000 ft. revetment, 1,190 ft. accretion paving, removing 2,820 ft. pile dikes from Missouri River, Camden Bend, near Napoleon, hired labor and government plant. **$100,000.** CD 9/19—ENR 9/25.

N. J., Atlantic City—Atlantic County, Court House, excavating, grading, banks, etc., streams. **WPA. $32,500.** G. R. Swinton, 930, Atlantic Ave., owner's and WPA engr.

N. J., Dover—Morris Co., Court House, Morristown, excavating, constructing 37,245 cu. yd. drainage ditches, Picatinny Arsenal, **WPA. $66,877.** C. Malstrom, Orange and N. 6 Sts., Newark, Owner's and WPA engr.

N. J., East Orange—Excavating, grading banks, etc. imprv. 2nd River for flood control. **WPA. $38,500.** W. Willigarod, Town Hall, WPA and town engr. CD 8/29—ENR 9/4.

†**Ohio**—U. S. Eng., Huntington, W. Va., dredging 263,000 cu. yd. in Ohio River, Marietta Island, about 1.8 mi. below Locks and Dam 17, to Monongahela & Ohio Dredging Co., Oliver Bldg., Pittsburgh, Pa., **$74,955.** Bids 9/5. CD 8/19—ENR 8/21.

UNCLASSIFIED

PROPOSED WORK

★**Alabama**—TRANSMISSION LINES, etc.—Alabama Electric Co-operative of Montgomery, M. A. McWilliams, pres., 381 mi. transmission lines, and 12,500 kw. generating plant. $2,500,000 REA allot.

Calif., Long Beach — FIELD IMPROVEMENTS—Imprv. Daugherty Field, swimming pool, paving, etc. Over $150,000. CAA. G. E. Baker, City Hall, engr.

Calif., Willows — RUNWAYS, etc. — U. S. Eng., Post Office Bldg., Sacramento, bids soon, runways, landing strip, taxiway and apron, municipal airport.

Conn., West Hartford—ATHLETIC FIELD—Town mgr., Town Hall, made plans athletic field, field house, grading, water supply sys., etc., Charter Oak Field, Flatbush Ave. Over $25,000.

★**Florida** — TELEPHONE EXPANSION — Southern Bell Telephone Co., Hurt Bldg., Atlanta, Ga., 1,950 mi. long distance lines, extens. and expansion in Florida. $4,000,000.

Idaho-Washington — AIRPORT — Pullman-Moscow Airport Bd., c/o R. D. Tucker, Pullman, Wash., lengthening, widening airport, surfacing runway, etc. $165,000. WPA funds sought.

Illinois—PIPELINE—Illinois Pipe Line Co., Findlay, O., 9 mi. crude oil pipeline between existing pipeline near Lancaster, Wabash Co., and Parkersburg Pool, Bonpas Twp., Richland Co.

Ill., Decatur—LIGHTING IMPROVEMENTS—Street lighting imprvt. program. $456,000. Warren & Van Praag, Inc., 447-450 Standard Office Bldg., consult. engrs.

†**Ill., Rock Island**—ARSENAL IMPROVEMENTS—War Dpt., 20 St. and Constitution Ave., N.W., Wash., D. C., arsenal imprvs., repairing roads, laying pipe lines, gas mains, landscaping, $496,719. Funds allotted.

Ia., Decorah—AIRPORT—Municipal airport, $25,000.

Ia., Osceola—SWIMMING POOL, etc.—City Park Bd., swimming pool, bath house, $30,000.

Ia., Perry — SWIMMING POOL, etc. — D. Kanealy, city clk., municipal swimming pool and bath houses. $50,000-$60,000. WPA.

Ia., Washington—SWIMMING POOL—Defeated bonds swimming pool. $28,000. CD 9/8—ENR 9/11.

★**Mass., East Boston (sta. Boston)**—SHIPYARD—Bethlehem Steel Corp., Fore River Yard, E. Howard St., Quincy, shipyard. $24,000,000.

Missouri — RURAL ELECTRIC LINES — Crawford Electric Co-operative, Inc., Bourbon, 400 mi. rural electric lines, Franklin, Jefferson and Washington Counties. $400,000. REA allot.

Mont., Helena—RUNWAYS—U. S. Eng., Fort Peck, bids in spring, paving 1 mi. N/S runway and 5,800 ft. NW/SE runway, airport. $114,800. CAA.

†**N. J., Bellmawr**—LANDSCAPING, etc.—Federal Wks. Agency, 7 and D Sts. S.W., Wash., D. C., landscaping, excavating, grading at grounds for defense housing. $76,800. WPA. G. R. Swinton, 930 Atlantic Ave., Atlantic City, WPA and owner's engr.

N. J., Camden—PARK IMPROVEMENTS—Camden Co. Park Comn., Court House, imprv. parks, grading, landscaping, etc. $51,000. WPA. G. R. Swinton, 930 Atlantic Ave., Atlantic City, owner's and WPA engr.

N. J., Egg Harbor and **Galloway** AIRPORT—City of Atlantic City, City Hall, Atlantic City, clearing, excavating, grubbing 596 acres land for airport. $101,320. WPA. G. R. Swinton, 930 Atlantic Ave., Atlantic City, owner's and WPA engr.

†**N. J., Fort Monmouth**—LANDSCAPING, etc. — Con. Q.M., landscaping, excavating, grading. $55,000. WPA.

N. J., Nutley—PARK IMPROVEMENTS—Park imprvs., sewers, curbs. $59,000. WPA. D. Shepherd, Town Hall, town and WPA engr.

★**N. M., Albuquerque**—AIRPORT IMPROVEMENTS—Extensive runway extens., imprvs. $680,000. Application filed with WPA.

N. Y., Brooklyn—BOARDWALK—President Brooklyn Boro, Boro Hall, boardwalk, Esplanade, Manhattan Beach. $350,000.

N. Y., New York—BULKHEAD SHEDS, etc. —Dpt. Docks, Pier A, North River, reconstructing, repairing existing bulkhead sheds of Piers New 2 and 3, altering equip. Bulkhead Shed Pier No. 3, North River. $217,000.

N. Y., New York—COMFORT STATION—Dpt. Parks, Arsenal Bldg., Central Park, 64 St. and 5 Ave., comfort station, City Hall Park, Manhattan Boro. $42,000.

N. Y., New York—SANITATION DUMPING BOARD — Pres. Manhattan Boro, Municipal Bldg., sanitation dumping board with ramp complete between E. 31 St. and E. 33 St., East River. $323,000.

★**N. Y., New York**—WHARF, etc.—President Manhattan Boro, Municipal Bldg., constructing marginal wharf E. 96 St., fireboat pier, E. 94 St.; reconstructing 2,10 ft. east Dr., adjoining block each of York Ave., E. 96 and E. 99 Sts. $792,000.

O., Columbus—CABLE—Ohio Bell Telephone Co., 750 Huron Rd., Cleveland, replacing 22,000 ft. overhead and underground cable, Franklin Co. $350,000.

†**Okla., Tulsa** — RUNWAYS — U. S. Eng., Wright Bldg., postponed bids to have been opened Sept. 30, runways, taxiways, compass swinging base, control tower, Aircraft Assembly plant. Will readvertise. CD 9/26.

Oregon—RURAL ELECTRIC LINES—Central Electric Co-operative, M. Sharp, mgr., Madras, bids in October, 93 mi. rural electric distr. sys. $85,000. REA. CD 7/31.

Pennsylvania—RAILROAD REMOVAL—Tionesta Valley Ry. Co., H. F. Thompson, ch. engr., 330 Government Pl., Williamsport, removing tracks 13 mi. railway line between Sheffield and Sheffield Junction, and 1½ mi. branch lines, Warren and Forrest Counties. $25,000.

Pennsylvania — TRANSMISSION LINES — Adams Electric Co-operative, C. A. Cluck, supt., Gettysburg, 396 mi. lines, York, Franklin and Cumberland Counties, office building, complete construction already started. $487,000 REA allot.

★†**Pa., Corapolis**—AIRPORT — U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., airport, another 1 at new location, 500x5,200 ft. NE/SW landing strip, 150x5,200 ft. paved 500x5,200 ft. E/W landing strip, 150x5,200 ft. paved, 500x5,200 ft. NW/SE landing strip, 500x5,200 ft. paved, lighting, etc., at Moon Twp., Coraopolis Hts., near here, for Comrs. Allegheny Co., R. G. Woodside, controller, Pittsburgh. $2,600,000. CAA.

S. D., Webster—AIRPORT—F. Gruby, city clk., airport. $25,000.

Tex., Alvin — ATHLETIC COURTS, etc. — Athletic courts, grading, concrete swimming pool, etc., for recreation center. $60,000. Applied for DPW funds.

Tex., Georgetown—AIRPORT—U. S. Eng., Galveston, voted bonds airport, grading, clearing, paving, landing strips etc. $436,000 C.A.A. CD 8/21—ENR 8/28.

★†**Tex., Houston**—AIR CORP TRAINING CENTER—U. S. Eng., Federal Bldg., Galveston, expanding Ellington Field Air Corps Training Center. $1,500,000.

★†**Tex., Midland**—AIR SCHOOL IMPROVEMENTS—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., extensive additional construction, incl. grading, draining, paving runways, aprons, taxi strips, etc., utilities and tiedown rings, Advanced Twin-Engine Air Corp. School. $900,000.

★†**Tex., Pottsboro**—FLYING SCHOOL—U. S. Eng., Citizens Bank Bldg., Denison, expansion Basic Air Flying School. $1,375,000 additional funds allot.

Tex., San Antonio — BLEACHERS, etc. — C. K. Quinn, mayor, plans by M. G. Simons, Aztec Bldg., 2 athletic field bleachers and 2

UNCLASSIFIED (Proposed Work, Cont'd.)

recreation centers. $125,000; rein.-con., steel baseball grandstand, facilities, $93,235. Applied for DPW funds.

†Tex., San Antonio — RAILROAD SPURS, etc.—Con. Q.M., Fort Sam Houston, railroad spurs, grading, levelling, draining, etc., WPA. $101,552.

★**Tex., San Antonio**—SWIMMING POOLS—C. K. Quinn, mayor, 6 rein.-con. municipal swimming pools, imprv. 5 others. $600,000. Applied for DPW funds. M. G. Simons, Aztec Bldg., archt. CD 6/20—ENR 6/26.

†Wash., Spokane—RUNWAYS, etc.—U. S. Eng., Central Bldg., Seattle, 2 runways, lighting sys., etc., Geiger Field. $89,241. WPA funds sought.

★**Wash., Tacoma**—SUBSTATION—A. M. Angove, clk. Contract Bd., enlarging tideflats substation, incl. transformer banks, condensers, steel structures, exten. switchboard and control bldg., etc. $625,000.

Wash., Westport — BERTHING FACILITIES—Grays Harbor Port, Hoquiam, reconstructing, exten. berthing facilities, fishing dock. $36,500.

Wisconsin — RURAL ELECTRIC LINES — Bayfield Electric Co-operative, Iron River, 225 mi. rural electric transmission lines. $202,000. Wis. Development Auth., 602 Tenney Bldg., Milwaukee, engr.

Wisconsin—TRANSMISSION LINES—Marathon-Portage Electric Co-operative, Wausaw, over 200 mi. rural electric transmission lines. $192,000. Wis. Development Auth., 602 Tenney Bldg., Milwaukee, engr.

★**Que., Kenogamie** — POWER DEVELOPMENT—Aluminum Co. of Canada, Ltd., Sun Life Bldg., Montreal, power development on Peribonka River, at Shipshaw, near here, consisting canal on east side of dam at Chute a Caron. $15,000,000.

BIDS ASKED

Bids Asked After October 2

†Kan., Dodge City—AIR NAVIGATION FACILITIES—U. S. Eng., Caddoa Dist., Caddoa, Colo., air navigation facilities.

Bids Asked October 9

Ill., Chicago — WATERPROOFING SUBWAY STRUCTURES—City, Office P. Harrington, Comr. Subways & Superhighways, 20 N. Wacker Dr., Contr. W-2, waterproofing subway structures, State St. subway.

†Md., Aberdeen Proving Ground—REINFORCING BARS, STRUCTURAL STEEL, etc.—Con. Q.M., furnishing, del., 165 tons reinforcing bars, wire mesh, chairs, spacers, etc., also 680 tons fabricated structural steel and miscellaneous metal for constructing assembly shop and remodeling heating plant and related work, f.o.b. cars Aberdeen Proving Ground; adv. ENR 10/2.

Texas—RURAL ELECTRIC LINES—South Plains Electric Co-operative, Inc., W. G. Newton, supt., Lubbock, 138 mi. transmission lines. Midwestern Eng. & Constr. Co., McBirney Bldg., Tulsa, Okla., engrs. CD 8/7—ENR 8/14.

†Tex., Amarillo — AIRPORT IMPROVEMENTS—U. S. Eng., Caddoa, Ariz., airport imprvs., 36,000 cu. yd. grading, 84,300 cu. yd. asphaltic concrete runway paving 24,000 cu. yd. base course for runways, 20 acres seeding, etc. $120,000.

Bids Asked October 10

†R. I., Bristol—FENDER PILES, etc.—Coast Guard Div., Treas. Dpt., Customhouse, Boston, Mass., renewing fender piles, grading, surfacing, Coast Guard Station, Bristol Depot.

†Ore., Bonneville—STEEL DISTRIBUTION CENTERS, etc.—U. S. Eng., Pittock Blk., Portland, steel distr. centers, instrument and lighting cabinets, etc., for powerhouse, Bonneville Dam. Inv. 698-42-193.

Bids Asked October 14

†O., Youngstown—LOOP ANTENNA SYSTEM, etc.—Civil Aeronautics Admin., Commerce Bldg., Wash., D. C., loop antenna sys. and radio facility building, near here, Proposal 1177, adv. ENR 10/2.

†Ore., Bonneville—TRANSFORMERS—U. S. Eng., Pittock Blk., Portland, furnishing seven 60,000 kva. transformers for powerhouse, Bonneville Dam. Inv. 698-42-101.

†Tex., Denison—TURBINES and GOVERNORS—U. S. Eng., Citizens Bank Bldg., Denison, two 56,000 hp. hydraulic turbines and governors for Denison Dam Power Plant. Extended date. CD 9/16—ENR 9/18.

Bids Asked October 17

†California—RACK FRAMES, etc.—Bureau Reclamation, Customhouse, Denver, Colo., furnishing, del. rack frames, rack sections, counting racks, migratory-fish control, Central Valley Project, Spec. 1569-D.

†Washington—PIER NOSES—Bureau Reclamation, Customhouse, Denver, Colo., furnishing, del. 18 cast-steel, draft-tube pier noses for Grand Coulee power plant, Columbia Basin Project, Spec. 1565-D.

Bids Asked October 20

†Arizona — GATES and HOISTS — Bureau Reclamation, Customhouse, Denver, Colo., furnishing, del. 40 radial gates and 40 radial-gate hoists for various structures on "A" and "B" canals and laterals, Yuma Mesa Div., Gila Project, Spec. 1567-D.

Bids Asked October 21

Pa., State College—WIND TUNNEL—General State Auth., 2 and Locust Sts., wind tunnel, etc. for student laboratory and experiment work, Pennsylvania State College.

Bids Asked October 22

†California — CONDUIT LINERS — Bureau Reclamation, Customhouse, Denver, Colo., furnishing, del. eighteen 102 in. diam. conduit liners for installation in river outlets, Shasta Dam, Central Valley Project, Spec. 998. Adv. ENR 10/12.

Bids Asked October 24

†Arizona-California — MOTOR CONTROL EQUIPMENT—Bureau Reclamation, Customhouse, Denver, Colo., furnishing, del. motor-control equip. for Pump. Plant 1, Gravity Main Canal, Gila Project, Parker Dam Power Project, Spec. 1570-D.

LOW BIDDERS

Del., Wilmington—AIRPORT—U. S. Eng. 900 Customhouse, 2 and Chestnut Sts., Phila., Pa., Sept. 22, drainage, paving for 3 runways and 3 taxiways, New Castle Co. airport, Inv. 697-42-106, near here, from Suburban Industries, Inc., Ardmore, Pa., Alternate A **$390,776.** Est. $379,202. CD 9/9—ENR 9/11.

★**†Ga., Valdosta** — RUNWAYS, etc. — U. S. Eng., Jacksonville, Fla. constructing draining, paving aprons, runways and taxi strips, Army Air Corps Advanced Training School, from E. Jack Smith, 756 Hurt Bldg., Atlanta. **$1,257,355.**

†Idaho, Boise—AIRBASE STORAGE FACILITIES—U. S. Eng., 628 Pittock Blk., Portland, Ore., Sept. 18, ordnance storage facilities, Boise Air Base, from C. W. Watkins, Box 1564. **$130,036.**

†Mass., Salem—SEAPLANE RAMP—Coast Guard Div., Treas. Dpt., 14 and D Sts. S.W., Wash., D. C., Sept. 22, seaplane ramp, Coast Guard Station, Winter Isle, from MacDonald Co., 88 Broad St., Boston, **$120,000.** Est. $140,000. CD 9/17.

†Va., Langley Field—IMPACT BASIN—U. S. Eng., Langley Field, impact basin Langley Field Laboratories, from Virginia Eng. Co., Newport News, **$159,400.**

†Wash., McChord Field — RUNWAY — U. S. Eng., Central Bldg., Seattle, Sept. 23, paving northwest-southeast runway, from Fiorito Bros., 1100 Leary Way, Seattle, **$102,160.** Est. $112,380. CD 9/16.

CONTRACTS AWARDED

†Fla., West Palm Beach—GAS FUELING SYSTEM—U. S. Eng., P. O. Box 4970, Jacksonville, gas fueling sys., Morrison Field, to Ivy H. Smith Co., Barnett Bldg., Jacksonville, **$130,453.**

Georgia and **Alabama**—TELEPHONE CIRCUITS—Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta, Ga., and American Telephone & Telegraph Co., 32 6 Ave., New York, N. Y., telephone circuits from Atlanta, Ga. to Mobile, Ala., own forces. **$386,000.**

★**Ill., Chicago**—STATION FINISH—P. Harrington, comr. Subways & Superhighways, 20 N. Wacker Dr., station superstructure and finish, Contr. F-1, N. State St. and N. Clybourn Ave. Sects., and Contr. F-2, S. State St. and W. Division St. sect., Contr. F-3, furnishing, placing certain materials in 8 stations, to W. E. O'Neil Constr. Co., 2751 N. Clybourn St. **$977,278.** Bids 8/7. CD 7/8—ENR 7/10.

★**†La., Algiers**—NAVAL STATION — Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., rehabilitating present bldg., reconditioning wharf, Naval Station, to W. Horace Williams Co., Southern Bldg., New Orleans. **$600,000.**

†Me., Houlton — HANGARS — U. S. Eng., Park Sq. Bldg., Boston, Mass., 2 steel hangars for Air Corps, Army Air Base, to Caye Constr. Co., Inc., 356 Fulton St., Brooklyn, N. Y. **$280,000.**

★**†Me., Presque Isle**—HANGARS, etc.—U. S. Eng., Park Sq. Bldg., Boston, Mass., 4 steel hangars, boiler houses, Air Base, to Caye Constr. Co., Inc., 356 Fulton St., Brooklyn, N. Y. **$593,000.**

Michigan—OIL DEVELOPMENT—Gulf Refining Co., Gulf Bldg., Pittsburgh, Pa., extensive development crude oil properties, drilling wells, connecting and gathering lines, steel tank storage facilities, Osceola Co., own forces. Est. **$50,000.** CD 9/15—ENR 9/18.

Miss., Biloxi—APRONS, etc.—U. S. Eng. Mobile, Ala., aprons, etc. at Keesler Field., to Barber Bros. Contg. Co., Reymond Bldg. Baton Rouge, La., **$280,888.**

★**†Miss., Greenville**—HANGARS—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., Air Corp Hangars, to Frank G. Stewart Co., Broad and Chestnut Sts., Phila., Pa., **$166,700.**

N. J., Bayonne—RECREATION AREA—Imprv. recreation area, landscaping, courts, etc., **WPA. $58,500.** H. A. Jaeger, City Hall, city and WPA engr. CD 8/25—ENR 8/28.

N. J., Jersey City—WALLS—Hudson Co. Court House, 2,975 cu. yd. stone masonry walls. **WPA. $63,963.** F. Ra[illegible], Court House, WPA and co. engr.

N. J., Newark—LOADING PLATFORM—P. Ballantine & Sons, 57 Freeman St., rein.-con. steel loading platform, Freeman St., to W. Byrnes Bldg. Co., 430 Westfield Ave., Elizabeth, **$27,000.**

N. J., Newark—PARK IMPROVEMENTS—Essex Co. Park Comn., 115 Clifton Ave., grading 12,500 sq. yds. 6 in. penetration surfaces in parking areas, various parks, $53,764. sewers, curbs, granite block gutters, $65,000. **WPA.** R. D. Crater, 115 Clifton Ave., owners and WPA engr.

†N. J., Pedricktown—GROUND IMPROVEMENT—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., imprv. grounds, facilities, Delaware Ordnance Depot, **WPA. $65,000.** CD 8/29—ENR 9/4.

N. Y., Brooklyn—FERRY TERMINAL—Dpt. Docks, Pier A, North River, New York, reconstructing ferry terminal, 39 St. **WPA. $54,161.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Brooklyn—PLAYGROUNDS—Dpt. Parks, Arsenal Bldg., Central Park, 64 St. and 5 Ave., New York, playground, Albany and Foster Aves., **$200,228;** 52 St., $53,234. **WPA.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Kew Gardens—LANDSCAPING, etc.—Pres. Queens Boro, Boro Hall, 120-55 Queens Blvd., landscaping hys., flagstones, brick and granite blocks, etc., various locations, **WPA. $77,700.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., New York—PLATFORMS—Dpt. Docks, Pier A, North River, reconstructing platforms for Slips 1, 2, 3, 5, 6, 7 Whitehall and South Sts. Ferry Terminal, **WPA. $94,626.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

N. Y., New York—PLAYGROUND, etc.—Park Dpt., Arsenal Bldg., Central Park, 64 St. and 5 Ave., playground and comfort station, Bailey Ave. and W. 234 St. **WPA. $180,000.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

†N. Y., Rockaway Park—LANDSCAPING, etc.—Con. Q.M., 120 Wall St., New York, landscaping, grading, preventing sand erosion, general imprvs. to grounds, Fort Tilden, **WPA. $156,000.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

★**North Carolina** and **Georgia** — AERIAL CABLE—Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta, Ga., and American Telephone & Telegraph Co., 32 6 Ave., New York, N. Y., 239 mi. aerial cable from Charlotte, N. C., to Atlanta, Ga., own forces. **$1,675,000.**

South Carolina and **Florida**—TELEPHONE LINES—Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta, Ga., and American Telephone & Telegraph Co., 32 6 Ave., New York, 222 mi. telephone lines from Denmark, S. C. to Jacksonville, Fla., own forces. **$252,000.**

†Tex., Camp Wallace—DRILL AREA—Con. Q.M., draining, leveling, placing oyster shell topping on Military Drill Area, to Texas Gulf Constr. Co., Inc., 2215½ Mechanic St., Galveston. **$48,285.** Est. $50,000. CD 9/15—ENR 9/18.

Tex., Donna—GAS WELLS—La Gloria Corp., Corpus Christi, drilling, casing developing several gas (distillate) wells, vicinity of here, to Bainbridge & King, McAllen, approx. **$126,000.** CD 9/24.

†Tex., San Antonio — ATHLETIC FIELD, etc.—Con. Q.M., Kelly Field, athletic field, draining, gas, sewer, water lines, concrete tent bases, etc. **WPA. $165,725.**

Tex., Uvalde—AIR TRAINING SCHOOL—Hangar Six, Inc., c/o Stinson Field, Mrs. J. H. Lapham, San Antonio, expanding Air Training School facilities, hangar, concrete swimming pool, barrack, utilities, etc., to Stover & Younger, Inc., 1429 Milam Bldg., San Antonio. Approx. **$168,000.** CD 9/22.

†Utah, Salt Lake City—AIRPORT TAXIWAYS—U. S. Eng., Los Angeles, Calif., taxiways, Salt Lake City Airport, to W. E. Ryberg, 1259 E. S. Temple St., and Mullins & Wheeler, 23½ E. 1 St., Salt Lake City. **$255,250.**

★**†Wash., Seattle** — PIER and TRANSIT SHED—Con. Q.M., pier and transit shed, Port of Embarkation, to General Constr. Co., 3840 Iowa St. **$1,944,000.** Bids 7/5. CD 9/9—ENR 9/11.

★**†Wash., Seattle** — DRY DOCK — Todd-Seattle Shipbuilding Co., 1801 16 Ave. S.W., 90x410 ft. drydock, to General Constr. Co., 3840 Iowa St. Est. **$1,000,000.** Defense Plant Corp. will finance. CD 8/26—ENR 8/28.

★**N. S., Greenwood (Middleton)**—RECONNAISSANCE SCHOOL—Dpt. National Defense for Air, Ottawa, Ont., building and other units, General Reconnaissance School, to Tomlinson Constr. Co. Ltd., Yarmouth, **$580,000;** hangars, various bldgs., to M. A. Condon & Sons, Aberdeen St., Kentville, **$395,000.** CD 9/2—ENR 9/4.

LATIN AMERICA

Mexico, Sonora, Guaymas—Dpt. de S. P., Mexico, D. F., Mexico, plans tuberculosis hospital with cooperation of Guaymas philanthropists headed by Dr. Guillermo Rodriguez Garza. $210,000.

South America, Uruguay—Dpt. National Defense, c/o Pres. Alfredo Baldomir, Montevideo, plans large Naval Air Base, facilities, Laguna Negra and adjacent territory. $18,000,000.

PUBLIC BUILDINGS

PROPOSED WORK

★**Ala., Birmingham** — Birmingham Housing Auth., 262 dwelling units, ALA-1-5. $933,000 USHA allot.

Ala., Fairfield—Fairfield Housing Auth., 100 dwelling units, ALA-10-1. $315,000 USHA allot. CD 2/14—ENR 2/20.

Ala., Fort Payne — Fort Payne Housing Auth., J. Hill, exec. dir., plans by M. H. Tardy, Gadsden, 50 unit concrete block, brick housing, Ala. 11-1. $175,000. CD 7/24—ENR 7/31.

Ala., Guntersville — Guntersville Housing Auth., 40 dwelling units, ALA-14-1 and 10 dwelling units, ALA-14-2. $182,700 USHA allot.

Ala., Guntersville — Guntersville Housing Auth., Guntersville, plans by M. H. Tardy, Gadsden, 50 unit housing. $175,000. CD 9/25.

Ala., Jasper — Jasper Housing Auth., 40 dwelling units, ALA-12-1. USHA allot. CD 2/10—ENR 2/13.

★**Ala., Mobile**—Plans by H. I. Johnstone, 60 St. Francis St., hospital and nurses home. $1,350,000.

★**Ala., Montgomery** — Montgomery Housing Auth., 212 dwelling units, ALA-6-3 and 44 dwelling units, ALA-6-5. $854,100 USHA allot. CD 8/20—ENR 8/28.

Ala., Tarrant—Tarrant Housing Auth., 54 dwelling units, ALA-13-1. $180,000 USHA allot. CD 2/5—ENR 2/13.

Ariz., Flagstaff—Flagstaff Housing Auth., 46 dwelling units, ARIZ-6-1. $157,500 USHA allot. CD 6/3—ENR 6/5.

Ariz., Glendale—Glendale Housing Auth., 56 dwelling units, ARIZ-3-1. $199,800 USHA allot. CD 6/3—ENR 6/5.

Arkansas—South West Arkansas Regional Housing Auth., Arkadelphia, 185 dwelling units, rural housing, ARK 13-1, Clark, Columbia, Garland, Hempstead, Hot Spring, Howard, Lafayette, Little River, Miller, Montgomery, Nevada, Pike, Polk and Sevier Counties, $360,000 USHA allot.

Ark., Batesville—Northeast Arkansas Regional Housing Auth., 233 dwelling units, rural housing, ARK-11-1, Baxter, Clay, Craighead, Crittenden, Cross, Fulton, Greene, Independence, Izard, Jackson, Lawrence, Mississippi, Poinsett, Randolph and Sharp Counties. $450,000 USHA allot. CD 8/28—ENR 9/4.

Ark., Blytheville — Blytheville Housing Auth., 80 dwelling units, ARK-5-1. $270,000 USHA allot. CD 2/14—ENR 2/20.

Ark., Clarksville — North West Arkansas Regional Housing Auth., c/o W. L. Hunt, 233 dwelling units, rural housing, ARK-10-1, Benton, Boone, Carroll, Crawford, Franklin, Johnson, Logan, Madison, Marion, Newton, Scott, Searcy, Sebastian, Washington and Yell Counties. $450,000 USHA allot. CD 9/8—ENR 9/11.

Ark., Conway—Conway Housing Auth., 30 dwelling units, ARK-6-1 and 20 dwelling units, ARK-6-2. $180,000 USHA allot. CD 2/21—ENR 2/27.

Ark., Fort Smith—City School Bd., school. $150,000. C. Holland, mayor.

Ark., Harrison — School Bd., high school. $150,000.

Ark., Monticello—South East Arkansas Regional Housing Auth., c/o V. B. McClay, Monticello, 233 dwelling units, rural housing, ARK-14-1, Arkansas, Ashley, Bradley, Calhoun, Chicot, Cleveland, Dallas, Desha, Drew, Grant, Jefferson, Lincoln, Ouachita, Saline and Union Counties. $450,000 USHA allot. CD 8/28—ENR 9/4.

★**Ark., Texarkana**—Memorial Hospital, hospital. $500,000.

†**Calif., Benicia**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., shell loading plant, Benicia Arsenal.

Calif., Corona—Corona Housing Auth., 50 dwelling units, CAL-12-2. $174,600 USHA allot.

†**Calif., Long Beach-San Pedro** — Federal Works Agency, 7 and D Sts. S.W., Wash., D. C., 1,400 homes for families of industrial workers, Long Beach-San Pedro Harbor area.

†**Calif., Presidio (Sta. San Francisco)**—Federal Works Agency, 7 and D Sts. S.W., Wash., D. C., 40 homes for families enlisted men.

Calif., Redwood City—San Mateo Co. Housing Auth., 34 dwelling units, CAL-14-1. USHA funds allot. CD 4/30—ENR 6/8.

†**Calif., Vallejo**—Farm Security Admin., The Mall between 12 and 14 Sts. S.W., Wash., D. C., 500 demountable dormitory units for single workers, Mare Island Navy Yard.

★**Conn., New Britain**—Dr. C. C. Ring, supt. Schools, School Bd., brick, steel school, southeastern sect. $650,000. Applied for DPW funds.

Conn., North Haven—Bd. Selectmen, Town Hall, plans ready in October, 2 story, bsmnt., brick, steel, limestone school. $150,000. R. H. S. Booth, Old Orchard Rd., archt. P. D. Harrigan, 37 Whitney Ave., New Haven, engr. CD 8/2—ENR 8/7.

†**Conn., New Haven** — United States Housing Auth., F St. between 18 and 10 Sts. N.W., Wash., D. C., 300 homes for families of industrial workers.

★**Del., Wilmington** — Wilmington Housing Auth., 202 dwelling units, DEL-1-1. $885,600 USHA allot. CD 7/9—ENR 7/17.

★**Florida**—North West Florida Regional Housing Auth., Marianna, 375 dwelling units, rural housing, FLA-15-1, Bay Calhoun, Dixie, Escambia, Franklin, Gadsden, Gulf, Hamilton, Holmes, Jackson, Jefferson, Lafayette, Leon, Liberty, Madison, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton and Washington Counties. $675,000 USHA allot.

Ga., Cedartown—Cedartown Housing Auth., 54 dwelling units, GA-25-1. $180,000 USHA allot.

Ga., Thomasville — Thomasville Housing Auth., 36 dwelling units, GA-24-1 and 60 dwelling units, Ga-24-2. $315,000 USHA allot.

Idaho, Burley—Burley Housing Auth., 38 dwelling units, IDA-4-1. USHA allot.

†**Ill., Hanover** — Community High School Dist. 121 and School Directors' Dist. 4, Jo Daviess Co., temporary 6 classroom school, Docket Ill. 11-121. $100,000. **DPW.** CD 7/30 ENR 8/7.

Ill., Ottawa—La Salle Co. Housing Auth., 50 dwelling units ILL-14-1, Ottawa, 10 dwelling units, ILL-14-2, Oglesby, 10 dwelling units, ILL-14-3, Marseilles, and 50 dwelling units ILL-14-4, LaSalle. $463,500 USHA allot. CD 2/7—ENR 2/13.

†**Ill., Scott Field**—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., recreation center for Army Air Corps, Radio Communication School. $91,985.

Ind., Kokomo—Kokomo Housing Auth., 23 dwelling units, IND-7-2. USHA allot. CD 10/25—ENR 11/7.

Ia., Bettendorf—Bd. Educ., Jr. High School. $230,000. Federal Eng. Co., Davenport, archt.

Kan., Kansas City — Providence Hospital Assn., hospital addn. $300,000. Carroll & Dean, R. A. Long Bldg., Kansas City, Mo., archt. Filed application with PWA.

†**La., Alexandria**—Federal Security Agency, 25 and E Sts. N.W., Wash., D. C., recreation center, Docket La. 16-121, $92,816; recreation center, Docket La. 16-122, $75,000. **DPW.**

†**La., De Ridder**—Federal Security Agency, 25 and E Sts. N.W., Wash., D. C., recreation center, Docket La. 16-124. $75,000. **DPW.**

La., Lafayette—Lafayette Housing Auth., 50 dwelling units, LA-5-1, and 56 dwelling units, LA-5-2, $365,400 USHA allot. CD 2/7—ENR 2/13.

†**Md., Baltimore** — Farm Security Admin., The Mall between 12 and 14 Sts. S.W., Wash., D. C., 1,500 additional homes for families of civilian workers in aircraft industry, consisting 1,000 single demountable houses and 100 duplex portable cottages, each of latter containing 2 dwelling units, and 300 single demountable dormitory accommodations.

†**Md., Havre de Grace**—Comrs. Harford Co., hospital facilities, Docket Md. 18-113. $194,000. **DPW.** CD 8/13—ENR 8/21.

†**Mass., Chelsea**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., remodeling marine hospital. $340,000.

★**Mass, Chicopee**—Chicopee Housing Auth., 250 dwelling units, MASS-8-1. $1,043,100 USHA allot.

Mass., Methuen (br. Lawrence) — Dpt. Streets, 290 Bway., plans by Ashton & Huntress, 477 Essex St., Lawrence, 1 story, brick, steel utility plant, municipal garage, shops, repair facilities. $45,000.

★**Mass., Salem**—F. A. Gallagher, chn. Building Comn., 156 Loring Ave., 125 unit brick housing. $550,000.

Mass., Weymouth—A. Emery, chn. Town Building Com., 681 Broad St., sketches by L. E. Jallade, 597 5 Ave., New York, N. Y., brick, steel, stone Laban Pratt Memorial Hospital. $300,000.

†**Mass., Wrentham** — Wrentham Products Co., plant for manufacture aircraft engine parts for Navy Dpt. $80,960 for land and buildings, $361,299 for machinery and equip. Defense Plant Corp. will finance.

★†**Mich., Detroit** — Briggs Mfg. Co., 11631 Mack St., plant for manufacture aircraft equip. for War Dpt. $3,163,799 for land and buildings, $5,684,754 for equip. Defense Plant Corp. will finance.

Minn., Zumbrota—Bd. Educ., G. C. Erredge, clk., bond election Oct. 7, school. $150,000. Ellerbe & Co., 1021 First Natl. Bank Bldg., St. Paul, archts. CD 4/16—ENR 4/24.

Miss., Clarksdale—Coahoma Co. Housing Auth., 25 dwelling units rural housing, MISS-14-1. USHA allot.

Miss., Grenada—R. S. Sharp, mayor, enlarging hosiery mill. $50,000.

†**Miss., Hattiesburg**—City, 1 story, bsmnt. recreation bldg. for negro soldiers stationed at Camp Shelby, Docket Miss. 22-116. $38,850. **DPW.**

†**Miss., Jackson**—Hinds Co. Special Consolidated School Dist., school facilities, Docket Miss. 22-109. $82,000. **DPW.**

†**Miss., Moss Point** — Municipal Separate School Dist., school facilities, Docket Miss. 22-104. $195,000. **DPW.** CD 7/16—ENR 7/24.

†**Mo., Jefferson Barracks (br. St. Louis)**—Con. Q.M., plans completed by Study, Farrar & Majers, Arcade Bldg., St. Louis, theatre and recreation bldg. Brussel & Viterbo, Arcade Bldg., St. Louis, engrs. CD 4/28—ENR 5/1.

†**Mo., Waynesville** — State Bd. Health, health center and clinic facilities, Docket Mo. 23-121. $26,250. **DPW.**

†**Neb., Omaha**—Omaha School Dist., high school addn., Docket Neb. 25-108. $390,000. **DPW.** CD 7/22—ENR 7/24.

†**N. H., Portsmouth** — City, school addn., Docket N.H. 27-101. $182,220. **DPW.**

N. J., Bellmawr—Bd. Educ., plans by J. N. Hettel, 501 Cooper St., Camden, school. $200,000.

★**N. J., Paterson**—Paterson General Hospital, 528 Market St., plans by F. J. Viceland, 140 Market St., 5 story, bsmnt., brick, steel hospital addn. $845,000.

★†**N. Y., Lackawanna**—Bd. Educ., plans by Roswell E. Pfohl, archt. and engr., 187 Niagara St., Buffalo, 3 story, part bsmnt. high school, Docket N. Y. 30-105, for DPW. $1,112,497. CD 9/8—ENR 9/11.

†**N. Y., Lackawanna**—Lackawanna Housing Auth., 200 unit defense housing for FWA.

†**N. Y., Niagara Falls**—Defense Homes Corp., 811 Vermont Ave. N.W., Wash., D. C., 150 unit defense housing.

†**N. Y., Sidney**—Town, hospital, Docket N. Y. 30-101, $130,000. **DPW.**

North Carolina — Eastern North Carolina Regional Housing Auth., D. C. McCotter, chn., Cash Corner, 275 dwelling units, rural housing, NC-10-1, Bladen, Carteret, Craven, Duplin, Harnett, Johnson, Jones, Onslow, Pamlico, Pender and Sampson Counties. $495,000 USHA allot.

N. C., Concord—Concord Housing Auth., 46 dwelling units, NC-8-1 and 46 dwelling units, NC-8-2. $320,400 USHA allot. CD 2/7—ENR 2/13.

†**N. C., Jacksonville**—Federal Security Agency, 25 and E Sts. N.W., Wash., D. C., recreation bldg. in Anslow Co. Docket N.C. 31-126. **DPW.**

N. M., Clovis—Clovis Housing Auth., 78 dwelling units, NM-2-1. $324,900 USHA allot.

†**O., Cleveland**—Cleveland Automatic Machine Co., 2269 Ashland Ave., plant for manufacture machine tool equip. for War Dpt. $184,000 for land and buildings, $156,000 for equip. Defense Plant Corp. will finance.

†**Okla., Lawton**—City, recreation center, Docket Okla. 34-115. $75,000. **DPW.**

Okla., Tulsa—City hall addn. $207,608. L. B. Senter, Tulsa, archt. Application filed with PWA.

Pa., Midland—Beaver Co. Housing Auth., Beaver City, 56 dwelling units, PA-14-6. $293,400 USHA allot.

★**Pa., New Kensington and Monessen**—Westmoreland Co. Housing Auth., 150 dwelling units, PA-18-1, New Kensington, and 150 dwelling units, PA-18-2, Monessen. $1,368,900 USHA allot. CD 2/4—ENR 2/6.

★**R. I., Providence**—P. Bldgs. Dpt., Windmill St., sketches 3 story, bsmnt., brick, steel, limestone C. V. Chapin Hospital addn. $975,000.

★†**S. C., Charleston**—School Dist. 4 of Charleston Co., plans by D. B. Hyer, Peoples Bldg., high school, Chicora Pl., Docket S.C. 38-110, $429,000; school, Ben Tillman Homes Housing Project, Docket S.C.-38-109, $415,153. **DPW.** CD 9/23—ENR 9/25.

†**S. C., North Charleston**—North Charleston Pub. Serv. Dist., sewer facilities, Docket S. C. 38-119. $83,885. **DPW.**

Tenn., Blountville—Sullivan Co. Bd. Educ., Blountville, high school. $185,000. L. I. Chase, Blountville, supt. Schools.

Tenn., Clarksville — Clarksville Housing Auth., Clarksville, J. M. Marable, chn., 50 unit white and 50 unit negro housing.

★**Tenn., Memphis**—Memphis Housing Auth., 369 dwelling units, Tenn-1-4-A. $1,350,000. USHA allot.

Tenn., Paris—Paris Housing Auth., 24 dwelling units, TENN-8-1 and 32 dwelling units, TENN-8-2. $211,500 USHA allot. CD 6/2—ENR 6/5.

†**Tex., Abilene**—Federal Security Agency, c/o C. O. Lee, 901 Maverick Bldg., San Antonio, recreation center. $34,000. Applied for DPW funds.

★†**Tex., Austin** — International Agricultural Corp., 20 N. Wacker Dr., Chicago, Ill., metallic magnesium plant, annual capacity 24,000,000 lbs., at Austin; also chloride plant, at Carlsbad, N. M. $12,317,000. Defense Plant Corp. will finance.

Tex., Beaumont—Lamar College, c/o Judge J. M. Coombs, Beaumont, rejected bids Sept. 15, 1 story, 150x175 ft., brick, concrete, stone auditorium. W. B. Livesay, Annex San Ja-

PUBLIC BLDGS. (Proposed Work, Cont'd.)

cinto Bldg., and Stone & Pitts, Goodhue Bldg., assoc. archts. CD 9/23—ENR 9/25.

†Tex., Brownwood—Federal Security Agency, 25 and E St. N.W., Wash., D. C., plans by Wyatt C. Hedrick, 1005 1st Nat. Bank Bldg., Fort Worth, and H. Blount, assistant archt., Brownwood, recreation center, swimming pool, athletic courts, etc., Docket Tex.-41-123, $69,540, **DPW.** CD 9/23—ENR 9/25.

★**Tex., College Station**—A & M College, c/o A. Walton, pres., plans by A. C. Finn & R. J. Cummins, Bankers Mortgage Bldg., Houston, college bldg., (Tex. 41-345). $1,750,000. Applied for DPW funds.

Tex., Dallas—Southern Methodist University, rejected bids Sept. 5, 1 and 2 story gymnasium, $150,000. CD 8/21—ENR 8/28.

†Tex., Galveston—City, recreation center, Docket Tex. 41-171, $75,000. **DPW.** CD 8/13—ENR 8/21.

Tex., Galveston—B. Harris, mayor, plans by R. R. Rapp, Cotton Exch. Bldg., 2 story, 144x167 ft. school (Tex. 41-339). $365,000. Applied for DPW funds. CD 8/27.

★**†Tex., Garland**—Gulberson Diesel Engine Co., 1000 Forest St., Dallas, plant for manufacturing radial diesel air-cooled engines for War Dpt. $892,840 for land and buildings, $1,518,257 for machinery and equip. J. Gordan Turnbull Co., c/o owner, engrs. Defense Plant Corp. will finance.

†Tex., Garland—Southern Aircraft Corp., Garland, additional expansion aircraft equip. manufacturing plant. $248,794, incl. $24,000 for land. Defense Plant Corp. will finance. Gill & Bennett, Great Natl. Life Bldg., Dallas, archts.

Tex., Harlingen—Harlingen Housing Corp., c/o J. Sellars, chn., Harlingen, over 100 frame type dwellings. $450,000.

Tex., Kilgore—Bd. Educ., plans by J. L. Downing, Kilgore, brick, concrete Junior College. $150,000.

★**Tex., San Antonio**—San Antonio Ind. School Dist., c/o L. M. Brown, pres., plans by Phelps, Dewees & Simmons, 1515 Majestic Bldg., 12 school addns., imprvs. (Tex. 41-341). $1,039,300. Applied for DPW funds.

†Va., Hampton—Federal Security Agency, 25 and E. Sts. N.W., Wash., D. C., recreation facilities, Docket Va. 44-135. $73,000. **DPW.**

Va., Newport News—City School Bd., school facilities, Docket Va. 44-127. $209,500. **DPW.**

†Va., Petersburg—City, 2 recreational bldgs., Docket Va. 44-163. $150,000. **DPW.**

†Va., Radford-Pulaski — Farm Security Admin., The Mall between 12 and 14 Sts. S.W., Wash., D. C., 750 single dormitory units for defense workers.

★**†Wash., Bremerton**—Consolidated School Dist. 100-C, Kitsap Co., plans by Naramore & Brady, Central Bldg., Seattle, high school, junior high school, 3 elementary schools, 2 schools addns. altering 2 schools. Docket Wash.-41-111. $2,330,000. **DPW.** CD 9/23—ENR 9/25.

Wash., Forks—Clallam Co. Housing Auth., Port Angeles, 40 dwelling units, WASH-4-1. USHA allot.

W. Va., Martinsburg—Martinsburg Housing Auth., 20 dwelling units, WVA-6-3. USHA allot. CD 2/7—ENR 2/13.

W. Va., Wheeling—Wheeling Housing Auth., 40 dwelling units, WVA-3-3. $190,800 USHA allot. CD 2/7—ENR 2/13.

†Wyo., Cheyenne—School Dist. 1, Laramie Co., school addn., Docket Wyo. 48-104. $25,000. **DPW.**

Alaska, Ketchikan—School and gymnasium. $247,000. DPW funds sought. CD 7/29—ENR 7/31.

†Alaska, Ketchikan—Federal Works Agency, 7 and D Sts. S.W., Wash., D. C., recreation center. $60,000.

★**P. R., Guayama** and **Catano**—Guayama and Catano Housing Auth., 142 dwelling units at Guayama, P. R. 3-14; 152 dwellings units, at Catano, P. R. 3-15. $615,000 USHA allot.

T. H., Hilo—Hilo Housing Auth., 90 dwelling units, T.H. 1-4. $135,000 USHA allot.

★**Ont., Ottawa**—Secy. Dpt. P. Wks., Ottawa, bids soon temporary hostel. $500,000. C. D. Sutherland, c/o owner, archt.

★**Que., Quebec City**—Wartime Housing, Ltd., 55 York St., Toronto, Ont., bids soon 250 single family units, near St. Malo Parish, near Route Bell, local imprvs., incl. sewers, watermains, sidewalks, etc. About $600,000.

BIDS ASKED

Bids Asked October 7

†Ark., Hope—Farm Security Admin., Donaghey Bldg., Little Rock, dwellings and other bldgs. for farmstead units.

†Ark., Wynne—Farm Security Admin., Donaghey Bldg., Little Rock, dwellings, barns and other bldgs. for farmstead units.

†N. Y., Staten Island—Pub. Bldgs. Admin., 9 and D Sts. S.W., Wash., D. C., miscellaneous repairs to U. S. Marine Hospital.

†N. C., Camp Davis—Con. Q.M., 2 cantonment type buildings, oil house, grease and wash racks.

Tex., Port Arthur—B. N. Taylor, city mgr., 1 story barge terminal warehouse. J. Earle Neff & C. L. Wignall, 419 6 St., archts.

†Tex., San Antonio—U. S. Eng., Federal Bldg., Galveston, permanent steam plant, Duncan Field.

Bids Asked October 8

†Ark., Prescott—Farm Security Admin., Donaghey Bldg., Little Rock, dwellings, barns, poultry houses, smoke houses for farmstead units.

†Maryland—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., storage warehouse for office, Chief of Engineers, at Dalecarlia Reservation, adjacent to Dist. of Columbia line, Montgomery Co., Md.; adv. ENR 10/2.

†Miss., Philadelphia—Farm Security Admin., Donaghey Bldg., Little Rock, buildings for farmstead units.

†O., Akron—Wilbur Watson & Associates, engrs., 4614 Prospect Ave., Cleveland, 1 story, 90x280 ft., brick, steel concrete synthetic rubber factory, for Firestone Tire & Rubber Co., 1278 S. Main St., Defense Plant Corp. will finance. CD 7/23—ENR 7/31.

Pa., Pittsburgh—Bd. Educ., H. W. Cramblet, secy., Administration Bldg., 1 story, bsmnt., brick Westinghouse High school addn., 1011 Mirtland Ave. $200,000. Owner's Architectural Bd., Marlon M. Steen, Administration Bldg., chg. archt. CD 2/27—ENR 3/6.

Bids Asked October 9

†Ark., Fort Smith—Farm Security Admin., Donaghey Bldg., Little Rock, dwellings and other bldgs. for farmstead units.

†La., Rayville—Farm Security Admin., Donaghey Bldg., Little Rock, buildings for farmstead units.

†Md., Aberdeen Proving Ground—Con. Q.M., complete assembly shop and remodeling heating plant; adv. ENR 10/2.

†Miss., Charleston—Farm Security Admin., Donaghey Bldg., Little Rock, bldgs. for farmstead units.

Bids Asked About October 10

Minn., Caledonia—Bd. Educ., E. J. Crotty, clk., grade and high school. $150,000. E. B. Croft, 1004 Marquette Ave., Minneapolis, archt. CD 6/26—ENR 7/3.

Bids Asked October 10

†Mo., Fort Leonard Wood—Con. Q.M., 2 barracks; adv. ENR 10/2.

O., Columbus—Bd. Trustees Ohio State University, C. E. Steeb, secy. 3 story, 90x210 ft., brick, steel agriculture laboratory bldg. $350,000. H. D. Smith, Brown Hall, Ohio State University, university archt. CD 6/25—ENR 7/3.

Bids Asked About October 11

†N. H., Manchester—Pub. Bldgs. Admin., 9 and D Sts. S.W., Wash., D. C., 85 dwelling units, Weston Rd., Project 27021X. $295,000. CD 9/10—ENR 9/18.

Bids Asked October 11

★**S. C., Charleston**—Bd. Visitors, The Citadel, J. P. Thomas, chn., Charleston, Barracks 4. $600,000. Lockwood Greene Engineers, Inc., Spartanburg, engrs. CD 3/25—ENR 3/27.

Bids Asked October 13

Tex., Winters— T. A. Smith, mayor, power plant with electric lighting, generating units, etc. H. B. Gieb & Co., Texas Bank Bldg., Dallas, engrs. CD 7/29—ENR 7/31.

Bids Asked October 14

†Ark., Lake Village—Farm Security Admin., Donaghey Bldg., Little Rock, buildings for farmstead units.

★**N. Y., Suffern**—Bd. Educ., Central School Dist., Suffern, school. $800,000. Tooker & Marsh, 101 Park Ave., New York, archts.

Bids Asked October 15

†Ark., Jonesboro—Farm Security Admin., Donaghey Bldg., Little Rock, buildings for farmstead units.

†Md., Annapolis—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., instruction and storage bldg., Naval Academy, Spec. 10486. CD 9/4—ENR 9/11.

†N. H., Portsmouth—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., brick, steel prison addn., Portsmouth Navy Yard, Spec. 10506.

O., Bowling Green—State University, 2 brick, steel, concrete, stone dormitories. $350,000. R. B. Schildknecht, 705 Ohio Dpt. Bldg., Columbus, state archt.

Bids Asked About October 15

†S. C., Columbia—City, 2 story, 172x210 ft. brick, stone recreation bldg., for white soldiers, Docket S.C. 38-102, $216,867; 1 story, concrete block recreation bldg. for negro soldiers, Docket S.C. 38-103, $25,653, for USO. **DPW.** Lafaye, Fafaye & Fair, 1226 Sumter St., archts. CD 9/16—ENR 9/18.

Bids Asked October 16

†Ark., Paragould — Farm Security Admin., Donaghey Bldg., Little Rock, buildings for farmstead units.

Bids Asked October 20

†California — Bureau Reclamation, Customhouse, Denver, Colo., furnishing, del. structural steel framing for garage and warehouse, Coleman Station, for migratory-fish control, Central Valley Project, Spec. 1568-D.

N. Y., Manhasset—School ... grade ... high school addns., $357,000. ... Keer & Ma... 101 Park Ave., New York, ... archts. CD 9/...

Bids Asked Octob...

Calif., San Luis Obispo— ... Boyd, ... archt., P. Wks. Bldg., Sac... ento, 1 st... rein.-con., wood frame dairy ... milk house ... meat animals laboratory, for ... ate.

Bids Asked About No...ber 1

Kan., Topeka—Bd. Educ., A... Stout, ... Potwin School. $164,000. G... & Conkle, New England Bldg., archt. ... 5/21—E... 5/29.

Bids Asked Novem...21

★**†Mont., Fort Peck**—U. S. ... 1201 Da... son Bldg., Kansas City, ... power h... superstructure, surge tank ... bldg., instal... penstocks and butterfly valves for Fort P... Project. $2,000,000. CD 8/25—ENR 8/28.

LOW BIDDERS

★**Ill., Carbondale**—Illinois State Normal University, Sept. 18, 3 story, bsmnt. ... training school from Charles B. Johnson Son, Inc., 6 N. Michigan Ave., Chica... **$550,000.** CD 6/11.

★**†Ind., Connersville**—Pub. Bldgs. Admin. and D Sts. S.W., Wash., D. C., Sept. ... defense housing units, from Paul Steen Constr. Co., W. 1757-1st Natl. Bank Bldg., Paul, Minn., **$1,164,000.** CD 9/17.

†N. Y., Iona Island—Pub. Wks. Officer, Naval Dist., 90 Church St., New York, Sept. 23, inert storehouse and fuze magazine, ammunition Depot, Spec. 10532, from ... Constr. Co., Inc., 15 E. 40 St., New Yo... **$74,840.** CD 9/3—ENR 9/11.

Ore., Milwaukie—Milwaukie Housing Auth., 400 Masonic Bldg., Oregon City, Sept. 26, ... unit housing, from R. B. Hammond, Spe... Bldg., Portland. **$282,800.** CD 9/9—ENR ...

†Ore., Portland—U. S. Eng., Pittock Bl... Sept. 19, commissary bldg., Portland-Colu... Airport, Inv. 698-42-142, from F. Lobse... 8 Ave., Seattle, Wash. **$25,600.** CD 9/... ENR 9/11.

★**Tex, Dallas**—Dallas Housing Auth., ... Lucas Dr., Sept. 22, Cedar Springs hou... ing, 220 units, Tex. 9-3, from A. M. Camp... & Co., P. O. Box 141, Tyler. **$765,787.** USHA CD 8/27—ENR 9/4.

†Wash., Keyport—Puget Sound Navy Y... Bremerton, Sept. 24, 124x300 ft. machine sh... addn., 61x121 ft. rein.-con. foundry and pa... tern shop, Naval Torpedo Station, Sp... 10602, from J. W. Bailey, 228 9 Ave. N., Sea... tle. **$315,500.** CD 9/5—ENR 9/11.

CONTRACTS AWARDED

†Ala., Fort McClellan—Con. Q.M., hospital administration bldg., 2 barracks, 1 Red C... bldg. and induction bldg., to A. J. Hor... cutt Co., Inc., 2518 8 Ct. N, Birmingha... **$79,783.** CD 5/15—ENR 5/22, under Amst...

★**†Calif., Los Angeles**—Phelps Dodge Copper Products Corp., 40 Wall St., New York, N. Y., plant for manufacturing copper pro... ducts, separate contracts, for Navy D... **$831,000** land and buildings, **$2,269,000** eq... Phelps Dodge Eng. Co., 25 Hway., New Yo... N. Y., engrs. Defense Plant Corp. will finan... CD 7/15—ENR 7/24.

★**†Calif., Richmond** — Richmond Housing Auth., W. J. Richards, Jr., chn., 27... St., 450 defense housing units, Cal. 4171-X, ... USHA, to L. Epp, 4745 Geary Blvd., San Fra... cisco, **$1,490,877** (150 days). Bids 9/23. C... 9/3—ENR 9/11.

†Calif., San Francisco—Con. Q.M., Fort Mason, 4th Echelon Base motor repair shop, ... Meyer Constr. Co., 735 Portola Dr. **$333,6...**

†Calif., Vallejo—Farm Security Admin., ... Van Ness Ave., San Francisco, supplement... contract, six 2 story, wood frame house dorm... tories, to F. J. Early, Jr., 369 Pine St., San Francisco. **$170,000.** Additional to CD 6/2... ENR 6/5 under CA.

Conn., Stamford—Supt. schools, 59 Prospect St., 2 story, bsmnt, brick, steel, concrete, Cloonan School, Tome Rd., Hope and Woodland Sts., to John C. Smith, Inc., 28 Baldwin Ave., New Canaan. **$150,000.** Provost & Everett, 421 Main St., archts.

†Ill., Monstanto (br. East St. Louis)—Monsanto Chemical Co., 1700 S. 2 St., St. Louis, Mo., superstructure 1 story, 134x182 ft. brick bldg. for War Dpt., to Boaz-Kiel Constr. Co., 4030 Chouteau Ave., St. Louis, Mo. Est. **$400,000.** W. J. Knight & Co., Wainwright Bldg., St. Louis, Mo., engrs. CD 8/11—ENR 8/14.

★**†Kan., Baxter Springs**—Military Chemical Works, Inc., subsidiary Pittsburg & Midway Coal Mining Co., 1004 Baltimore St., Kansas City, Mo., constructing Jayhawk Ordnance Works, for War Dpt., to Freeto Constr. Co., Pittsburg, Kan., and F. H. McGraw & Co., 780 Windsor St., Hartford, Conn. **$18,193,600** for constructing plant, **$6,513,100** for equip. Chemical Constr. Corp., 30 Rockefeller Plaza, New York, N. Y., will design, supervise construction, and supervise operation until plant is in full production. CD 7/30—ENR 8/7.

†La., Camp Beauregard—Con. Q.M., reception center, to Pittman Bros. Constr. Co., 2... N. Galvez St., New Orleans, **$285,000.** CD 8/2... —ENR 5/1 under Alexandria.

†La., Camp Clairborne—Con. Q.M., chapel, recreation bldgs., utilities, to J. A. Harper, Crowville, **$438,107.**

PUBLIC BLDGS. (Contracts Awarded, Cont'd.)

★†La., **Camp Livingston** — Con. Q.M., 192 recreation bldgs., type RB-2, and 9 recreation bldgs., AC-1110, to Forcum-James Co., Dermon Bldg., Memphis, Tenn. **$532,680.**

★†La., **Lake Charles** — Mathieson Alkali Wks., Inc., 60 East 42 St., New York, N. Y., magnesium plant, annual capacity 36,000,000 lbs. for War Dpt., to M. W. Kellogg Co., 225 Bway., New York, N. Y. Est. **$16,000,000.** Defense Plant Corp. will finance. CD 7/31—ENR 8/7.

★†Md., **Aberdeen** — Con. Q.M., Aberdeen Proving Ground, 17 brick, steel, concrete arsenal bldgs., also artillery bldg., to Cummins Constr. Corp., 803 Cathedral St., Baltimore, cost-plus-fixed-fee-basis. Est. **$400,000-$500,000.**

★†Md., **Baltimore**—Pub. Bldgs. Admin., 9 and D Sts. S.W., Wash., D. C., 696 defense housing units for aircraft workers, Project 18091, to Cauldwell-Wingate Co., 101 Park Ave., New York, N. Y. Est. **$3,380,000.** Awarded 9/19. CD 9/18—ENR 9/11.

★†Md., **Curtis Bay-Fairfield (Sta. Baltimore)**—Baltimore Housing Auth., 709 E. Eager St., Baltimore, 500 defense housing units, Project 18097X, for USHA, to J. Slotnick Co., 91 Newbury St., Boston, Mass., **$1,480,000.** CD 9/10—ENR 9/18.

★†Mich., **Wayne** — Mutual Ownership Defense Housing Div., FWA, 7 and D Sts. S.W., Wash., D. C., three hundred 1 story, bsmnt., 24x28 ft. frame homes, to Currier Lumber Co., 17507 Van Dyke Ave., Detroit. **$979,000.** CD 9/11—ENR 9/18, under LB.

†N. Y., **Schenectady**—Con. Q.M., Warehouse 11 and office annex, Schenectady General Depot, to William G. Sheehan Constr. Co., 28-30 De Witt St., Albany. **$329,327.** Bids 9/8. CD 9/5.

★†O., **Massillon**—Pub. Bldgs. Admin., 9 and D Sts. S.W., Wash., D. C., 300 defense housing units, for industrial workers in Massillon-Canton area, to Henry Dattner, 1515 Barlum Tower, Detroit, Mich. **$1,220,000.** (**Correction**—status.) Bids 9/2. CD 9/17—ENR 9/25.

★†O., **Toledo**—American Propeller Corp., W. F. Wise, pres., c/o Aviation Mfg. Corp., 420 Lexington Ave., New York, N. Y., plant for production aircraft equip., for War Dpt., to Austin Co., 16112 Euclid Ave., Cleveland. **$982,192** for land and buildings, **$2,650,113** for machinery and equip. Defense Plant Corp. will finance. CD 9/26.

†S. C., **Camp Croft**—Con. Q.M., 2 motor repair shops, guest house, 3 recreation bldgs., hospital, administration bldg., to Southeastern Constr. Co., 218 W. 2 St., Charlotte, N. C. **$195,500.** CD 8/4—ENR 8/7, under Spartanburg.

S. C., **Rock Hill**—Winthrop College for Women, Dr. S. Phelps, pres., Rock Hill, dormitory, to Southeastern Constr. Co., 218 West 2 St., Charlotte, N. C. **$333,000.** Bids 9/23. CD 9/19—ENR 9/25.

★†Tenn., **Maryville**—Mutual Ownership Defense Housing Div., FWA., 7 and D Sts. S.W., Wash., D. C., 250 defense housing units, Project 40031X, Thomas McCroskey Farm, 2 mi. north of here, to A. H. Whisman Co., 422 Front Ave., Knoxville, **$703,588.** Bids 9/29. CD 9/24.

★†Tex., **San Antonio**—U. S. Eng., Federal Bldg., Galveston, supplemental contract depot supply bldg. addn., Military Area Duncan Field to Hill & Combs, 321 Melrose St., **$519,245.** Additional to CD 7/21—ENR 7/24 under CA.

★†Tex., **Wichita Falls**—Pub. Bldgs. Admin., 9 and D Sts. S.W., Wash., D. C., 175 dwelling units, Sheppard Field, Project 41121-X, to J. J. Bollinger Constr. Co., Braniff Bldg., Oklahoma City, Okla., **$651,240** (90 working days). Former contract rescinded. CD 9/16—ENR 9/18 under CA.

★†Utah, **Salt Lake City**—Remington Arms Co., Inc., J. H. Chasmar, mgr. military operations, Barum Ave., Bridgeport, Conn., ordnance plant for manufacturing ammunition, for War Dpt., to Broderick & Gordon, Colorado Springs, Colo. Est. **$17,769,597.** CD 8/20—ENR 8/28. Smith-Hinchman & Grylls, Inc., 800 Marquette Bldg., Detroit, Mich., and Royce J. Tipton, 1st Natl. Bank Bldg., Denver, Colo., will design and supervise construction.

★†Va., **Richmond**—Con. Q.M., 2 additional warehouses Army Quartermasters Depot, Bellwood, near Richmond, to Doyle & Russell, Central Natl. Bank Bldg. and Wise Contg. Co., 122 N. 8 St., **$1,250,000.**

Wis., Whitefish Bay (Milwaukee P. O.)—School Dist. 1, 2 story, 110x160 ft. high school addn., excavating, piling, cutstone, masonry, carpentry and millwork, to Robert L. Reisinger & Co., 733 N. Van Buren St., Milwaukee, **$168,113*****electrical work to Geo. F. Rohn Electric Co., 2422 W. Clybourn St., Milwaukee, **$14,000*****heating and ventilating, also plumbing, to Stoehr & Laudon, Inc., 1705 W. Clybourn St., Milwaukee, **$51,992** and **$14,872** respectively***structural steel and iron, to Milwaukee Bridge Co., 3282 N. 34 St., Milwaukee, **$18,963.** Grand total $267,940. Total est. $300,000. Bids 9/22. CD 9/4—ENR 9/11.

★†T. H., **Fort Shafter** —Con. Q.M., Fort Shafter, tunnel and cold storage plant, Inv. Q.M. 6812-41-53, to Pacific Bridge Co., 333 Kearny St., San Francisco, Calif., and Hawaiian Contg. Co., Ltd., 854 Kaahumanu St., P. O. Box 3468, Honolulu, T. H. **$634,367.** CD 7/1—ENR 7/10, under LB.

COMMERCIAL BUILDINGS

PROPOSED WORK

Conn., Hartford—W. A. Mauser, 402 Asylum Ave., plans by P. L. Goodwin, 32 E. 57 St., New York, N. Y., 3 unit, brick, steel apartment group, Asylum St. Over 150,000.

★**Ill., Chicago**—Schmidt, Garden & Erickson, archts., 104 S. Michigan Ave., soon let contract 8 story nurse's home, near 15 St. and Michigan Ave., for St. Luke's Hospital, 1439 S. Michigan Ave. $650,000. CD 8/28—ENR 9/4 under BA.

Ill., Chicago—W9XBK c/o Balaban & Katz, 175 N. State St., plans by W. L. Pereira, 221 N. La Salle St., television studio, 190 N. State St. $150,000.

Ill., Watseka—Iroquois Hospital, c/o J. C. Bailey, chn. Bd., Watseka, plans by P. W. Swern, 19 S. La Salle St., Chicago, 3 story hospital addn., S. 4 St. $175,000.

Minn., Willmar—Northwestern Bell Telephone Co., 224 S. 5 St., Minneapolis, exchange and office bldg., dial sys. $260,000.

★**Mo., Joplin**—St. Johns Hospital, plans by Carroll & Dean, R. A. Long Bldg., Kansas City, Mo., 5 story, stone hospital addn. $600,000. Applied for PWA funds.

Neb., Blair—Dana College, L. Siersbeck, pres., plans by John Latenser & Sons, 1307 Farnam St., Omaha, 3 story, brick, concrete administration bldg. $150,000.

★**N. J., Bridgewater**—Shepherd Manor, Inc., 29 Douglas Rd., Glen Ridge, plans by C. Horton, 40 Clinton St., Newark, three hundred 1½ and 2½ story, bsmnt. residences, Route 29. $1,500,000.

N. J., Camden—M. Phillips, Germantown, Phila., Pa., residences. Over $150,000.

N. J., Fair Lawn—V. Prielaet, 12 Fair Lawn Ave., 50 2 story, bsmnt., 24x32 ft., brick veneer and frame homes, W. Saddle River Rd. $250,000.

★**N. J., Jersey City**—Christ Hospital, 176 Palisade Ave., 5 story, bsmnt., 44x230 ft., brick, steel hospital addn., Palisade Ave. $500,000. J. T. Rowland, 30 Journal Sq., archt.

N. J., Little Falls—American Budget Homes Corp., 262 Central Ave., Newark, forty-seven 1½ story, bsmnt. homes, Lower Notch Rd. $188,000.

N. J., Saddle River—Skillman Gardens, Inc., Route 4, Paramus, plans by L. Danancher, 16119 Jamaica Ave., Jamaica, N. Y., fifty-four 1½ story, bsmnt., 25x40 ft., brick veneer homes, Skillman Terrace. $243,000.

N. J., Summit—Kent Pl. School, 42 Norwood Ave., soon lets contract 2 story, bsmnt., 30x160 ft., brick, steel cafeteria and teachers dormitory, Norwood Ave. Harrison, Fouilhoux & Abramowitz, 45 Rockefeller Plaza, New York, archts.

N. J., Summit—B. V. Zamore, 500 Grove St., Montclair, eighty-seven 1½ story, bsmnt., frame homes, Morris Ave. $348,000.

N. Y., New York—Rursdan Corp., 8 E. 48 St., plans by Leon & Lionel Levy, 527 5 Ave., 6 story, 75x94 ft. apartment, 6 E. 48 St. $150,000.

N. C. Burlington—Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta, Ga., plans by Hentz, Adler & Shutze, Candler Bldg., Atlanta, Ga., telephone bldg.

N. C., Wilmington—Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta, Ga., plans by Hentz, Adler & Schutz, Candler Bldg., Atlanta, Ga., telephone bldg.

Pa., Honesdale—Comerford Publix Corp., 54 Public Square, Wilkes-Barre, plans by M. J. DiAngelis, Temple Bldg., Rochester, N. Y., theatre, store, Main St. $150,000.

Pa., Kane—Kane Lodge, Loyal Order of Moose, Kane, store and clubhouse. $150,000.

★**Pa., Phila.**—Berman Bros., 6032 Market St., residences, Meridian St. sect. $500,000.

★**Tenn., Memphis**—Towers Development Co., 1491 Union, 100 residences, $500,000.

★**Tex., Grand Prairie**—Burleson & Garrett, Praetorian Bldg., 250 frame type dwellings, utilities, Indian Hills Addn. $600,000.

Tex., Grand Prairie—R. P. DeWitt and B. F. Fisinger & Associates, Great Natl. Life Bldg., Dallas, plans by R. P. DeWitt, Great Natl. Life Bldg., Dallas, 170 frame type dwellings, 70 acre tract. $400,000.

BIDS ASKED

Que., Montreal—Consolidated Housing Ltd., 10 E. St. James St., 150 dwellings. $350,000.

LOW BIDDERS

Calif., Napa—D. E. Jaekle, archt., 126 Post St., 2 story, rein.-con. hospital wing addns., from C. Cicero, 2184 Stockton St., for Victory Hospital, Napa, approx. **$150,000.** CD 9/17—ENR 9/25.

Calif., Richmond — Pacific Telephone & Telegraph Co., Telephone Bldg., San Francisco, 2 story, rein.-con., steel phone exchange, from Schuler & McDonald, 1719-16 St., Oakland, **$150,000.**

CONTRACTS AWARDED

Conn., Hartford—Neuro—Psychiatric Institute, 200 Retreat Ave., Dr. C. C. Burlingame, 8 story, 38x64 ft., brownstone, brick research science unit, Retreat Ave., to Richard Johnson Co., 387 Park St. Est. **$150,000.**

Conn., New Britain—Stanwood Corp., W. Main St., twenty-eight 1½ story, frame residences, W. Main St. sect. Owner builds. **$150,000.** H. W. Neumann, 350 5 Ave., New York, N. Y., archts.

★**Ia., Ankeny**—Dickinson & Co., 1118 Mulberry St., Des Moines, 175 dwellings, for ordnance plant workers. Owner builds. **$750,000.**

★**Mass., Chelmsford**—DeBow & Lahue, Inc., 969 Westford St., Lowell, 90 homes, Westford St. Owner builds. **$500,000.**

Mass., Leominster—Leominster Hospital, Hospital Rd., 2 story, 40x45 ft and 3 story, 36x42 ft. brick, stone hospital wings to H. P. Cummings Constr. Co., 14 Prospect St., Ware. Est. **$150,000.** CD 9/3—ENR 9/11.

N. J., Bayonne—Park Place Homes, c/o C. Shilowitz, archt., 26 Journal Sq., Jersey City, residences. Owner builds. Over **$300,000.**

N. J., Hackensack—Guertin Homes, Inc., 47 Mt. Vernon St., Ridgefield Park, thirty-five 2½ story, bsmnt., brick, stone veneer homes, Colonial Terrace, separate contracts, **$280,000.** L. G. Feinen, 717 Cedar Lane, Teaneck, archt. CD 8/29—ENR 9/4.

N. J., Newark—S. Bratter, 790 Broad St., 2 story, bsmnt., brick, steel, stone office bldg., Broad St., to Pellechia Constr. Co., 50 Branford Pl. **$200,000.** CD 7/25—ENR 7/31.

N. J., Teaneck — W. Hill, 120 Crane St., Bogota, 2 story, bsmnt., brick veneer, frame homes, W. Englewood Ave., separate contracts. **$180,000.** CD 9/2—ENR 9/4.

N. Y., Brooklyn—H. Levine Co., 1578 82 St., 59 two family homes, 82 and 83 Sts. Owner builds. **$240,000.** I. Kallich, 161 Remsen St., archt.

N. Y., Elmhurst (sta. Flushing)—Bruson Homes, 40-23 62 St., nineteen 2 and 3 story apartments, Van Horn St. and 52 Ave. Owner builds. **$150,000.** M. M. Elkind, 4-09 82 St., Jackson Heights, archt.

N. Y., Long Island City—Laurel Hill Apartments, Inc., 1914 85 St., Brooklyn, 6 story apartment, 43-07 39 Pl., separate contracts. **$180,000.** Cohn Bros., 191 Joralemon St., Brooklyn, archts. CD 9/16—ENR 9/18.

N. Y., New York—Hillside Holding Corp., 750 Grand Concourse, 6 story, apartment, Hillside and Nagle Aves., separate contracts. **$300,000.** J. M. Felson, 250 W. 57 St., archt. CD 9/18—ENR 9/25.

Ore., Portland—Sisters of Charity of Providence, 7 N. E. 47 Ave., nursery adjoining new hospital, to Malarkey & Kallander, McKay Bldg., Portland. Est. **$230,000.** J. W. Maloney, Yakima, Wash., archt.

Pa., Bryn Mawr—Country Homes, Inc., Mt. Pleasant Ave. and Devon St., residences. Owner builds. Over **$150,000.**

Pa., Homestead Park (br. Homestead)—J. Corace, 448 Antenor St., Pittsburgh, 36 two story, bsmnt. residences, separate contracts. **$200,000.**

Pa., New Kensington — B. Dattola, New Kensington, general contract 2 story, bsmnt., 70x120 ft., brick, tile, steel theatre, to Westmoreland Constr. Co., 622 W. Pittsburgh St., Greensburg; plumbing, to Elwood Plumbing Co., 722 5 Ave., New Kensington. Est. **$150,000.** CD 8/6—ENR 8/14.

Pa., Oil City — Pennsylvania Telephone Corp., H. M. Engh, genl. mgr., 20 E. 10 St., Erie, 1 and 3 story, 50x165 ft., brick, concrete, limestone, granite telephone office, garage and warehouse, to G. L. Scobel Co., 2027 State St., Erie. Est. **$150,000.** CD 9/3—ENR 9/11.

Pa., Phila. — Berman Bros., 6032 Market St., residences, Lansing Ave. sect. Owner builds. Over **$150,000.**

Pa., Phila. — Hyman Korman, Inc., 6033 Castor Ave., residences, Devereaux St. Owner builds. Over **$150,000.**

Pa., Phila.—J. Korman, 4655 Penhurst St., 62 residences. Owner builds. **$230,000.** J. Fieldstein, Widener Bldg., archt.

★**Pa., Phila.**—C. Metz, 6701 N. Broad St., residences, near Cheltenham Rd. Owner builds. **$500,000.**

Pa., Phila.—Paramount Constr. Co., 5701 N. 17 St., residences. Owner builds. **$150,000.**

Pa., Phila.—C. F. Schilling, Rowland St., residences. Owner builds. Over **$150,000.** C. H. Fries, N. Broad St., archt.

Pa., Phila. — Torresdale Corp., 507 Land Title Bldg., residences. Owner builds. **$150,000.** D. Jenkins, Oakland St., archt.

Pa., Wilkes-Barre—S. Z Moskowitz, archt., Meyer Bldg., 3 story, bsmnt. store, for The Hub, Inc., J. L. Hirshowitz, pres., Public Sq., to H. Mailander, 167 Barney St. Est. **$150,000.** Bids about 9/15. CD 9/10—ENR 9/18.

★**Tenn., Nashville**—Methodist Publishing Co., B. A. Whitmore, chn., 810 Broad St., office, to N. E. Yearwood, 1701 Church St., **$700,000.** CD 10/22—ENR 10/24.

Tex., Dallas—Wyatt Food Stores, c/o E. Wyatt, 703 Young St., 3 food stores and storage bldgs., brick, concrete, day labor and sub-contract. **$300,000.**

Tex., Houston—F. W. Sharp, c/o Brookhaven Addn., seventy 1 story, frame dwellings, Meadowbrook Addn., force account. **$265,000.** CD 9/18.

INDUSTRIAL BUILDINGS

PROPOSED WORK

★**Ala., Sheffield**—PLANT—Reynolds Metals Co., 7 and Bainbridge Sts., Richmond, Va., aluminum plant, Lister Hill. $8,000,000. RFC will finance. CD 7/22—ENR 7/24, under Alabama.

Calif., San Francisco—FOUNDRY — Pacific Brass & Fdry. Co., 2 and Clementina Sts., made plans 1 story, rein.-con. foundry. $40,000. N. B. Green, 55 New Montgomery St., engr. CD 5/7—ENR 5/15.

Calif., San Francisco—PLANT, etc.—Ready Mixed Concrete, Mariposa and Wisconsin Sts., plant and storage addns. $40,000.

Conn., New Britain — FACTORY — Fafnir Bearing Co., 37 Booth St., sketches, 2 story, 50x250 ft., brick, steel factory addn. $90,000.

★**Ill., Chicago** — PLANT — Republic Steel Corp., 332 S. Michigan Ave., plant addn. (South Chicago Works), 91 acres adjoining.

Ill., Meredosia—POWER PLANT — Central Illinois Pub. Serv. Co., Springfield, brick, stone, rein.-con. power plant. Sargent & Lundy, 140 S. Dearborn St., Chicago, engrs.

Ind., Brazil—PLANT — Advance Industrial Supply Co., Brazil, clay grits manufacturing plant. $40,000. Company's own Engineering Dpt., 111 W. Washington St., Chicago, Ill., archts.

Ind., Muncie — PLANT — Broderick Boiler Co., Macedonia Ave. and Big Four R.R., plant addns. $60,000 incl. equip.

★**Louisiana**—PLANT—Premier Refining Co., Longview, Tex., J. R. Parten, 2nd Natl. Bank Bldg., Houston, Tex., chn. Bd., aviation gasoline plant, Webster Parish. $1,730,000. CD 9/19—ENR 9/25, under Longview, Tex.

N. Y., Long Island—FACTORY—Pepsi Cola Co., 33 St. and 48 Ave., plans by Harrison, Fouilhoux & Abramovitz, 45 Rockefeller Plaza, New York, 2 story factory and warehouse, 47-40 34 St. $200,000.

Pa., Phila.—WAREHOUSE—Sears, Roebuck & Co., Roosevelt Blvd., warehouse alterations. $50,000.

Tenn., Memphis—WAREHOUSE—Producers Warehouse & Compress Co., c/o C. L. Andrews, 111 S. Front St., 176x594 ft. warehouse and office bldg. $175,000. G. D. Suter, 111 S. Front St., engr. CD 8/21—ENR 8/28.

Tex., San Benito — PLANT — Woolam Co., 257 N. Austin St., 1 and 2 story, brick, rein.-con. meat processing plant. $40,000.

Tex., Timpson—PLANT—Timpson Canning Plant, Timpson, expanding vegetable canning plant. $40,000.

★**Wis., Beloit**—POWER PLANT—Wisconsin Power & Light Co., 122 W. Washington Ave., Madison, power plant, sub-stations, cable lines. $4,000,000 incl. equip. E. J. Kallevang, Madison, ch. engr. Sargent & Lundy, Inc., 140 S. Dearborn St., Chicago, Ill., engrs. CD 9/26.

★**Ont., Leaside**—PLANT—Allward & Gouinlock, archts., 57 Bloor St. W., Toronto, bids soon plant, Eglinton Ave. E., for Research Enterprises, Ltd., Atlas Bldg., Toronto. $500,000.

Ont., Toronto—FACTORY—Cansfield Electrical Works Ltd., 260 Geary Ave., bids soon factory addn. About $45,000.

Ont., Toronto—PLANT—W. G. Smith, Ltd., 134 Royce Ave., bids soon plant. $90,000.

Ont., Woodstock—PLANT—Craig Machines, Ltd., Woodstock, plant exten. $40,000.

Ont., Woodstock—PLANT—Firestone Tire & Rubber Co. of Canada, Ltd., Beack Rd., Hamilton, bids soon plant addn., Oxford St. About $40,000.

Que., L'Epiphanie—PLANT—Veneer Industries, Ltd., L'Epiphanie, woodworking plant. $40,000.

Que., Montreal—FACTORY—Can. Cerlum Co., Ltd., 455 Craig St., factory. $40,000.

BIDS ASKED

Md., Baltimore—PLANT—B. J. Kavanaugh, 1100 Harford Ave., 2 story, 60x150 ft. rendering plant, 30x40 ft. boiler house, brick stack, concrete fdns., Phila. Rd. $45,000. H. L. Katz, 3212 Gwynns Falls Parkway, archt.

Wis., Appleton—LABORATORY — Institute of Paper Chemistry, 1101 E. South Water St., 2 story, bsmnt., 40x123 ft., steel, concrete, stone laboratory addn. Orbison & Orbison, 206 W. College Ave., engrs.

Ont., Toronto—FACTORY—Don Valley Paper Co., Beechwood Dr., East York (invitation only), factory addn. $40,000.

Que., St. Romuald—PLANT—B. V. D. Co., Ltd., 196 Commercial St., 2 story, 40x100 ft. clothing manufacturing plant addn., brick, concrete. About $45,000.

CONTRACTS AWARDED

Calif., Oakland — MACHINE SHOP — A. Warmington, 190 Lake St., machine shop, to M. Drinkward, 1333 106 Ave., **$40,000.**

Calif., San Francisco—STORAGE—Safeway Stores, 4 and Jackson Sts., Oakland, 2 story, rein.-con. storage bldg., to Cahill Bros., 206 Sansome St. **$310,000.** K. Theill, 580 Market St., engr.

Calif., San Jose—GARAGE—G. E. Sobey, Amer. Trust Bldg., remodeling garage, constructing 1 story, wood frame, brick addn., for L. L. Normandin, c/o archt., to E. Nommensen, 315 S. 17 St. **$45,000.** Est. $40,000. CD 9/17—ENR 9/25.

★**Conn., Bristol**—FACTORY—New Departure Div., General Motors Corp., 269 North Main St., 1 story, bsmnt., 160x583 ft. brick, steel factory unit, Plant C, to George A. Fuller Co., 587 Madison Ave., New York, N. Y. Est. **$500,000.** CD 8/26—ENR 8/28.

Conn., New Britain—WAREHOUSE—Fafnir Bearing Co., 37 Booth St., 1 story, 44x242 ft., brick, steel warehouse, to Margoney Contg. Co., Inc., 332 E. 149 St., New York. Est. **$40,000.**

Conn., Watertown—FACTORY — Watertown Mfg. Co., Echo Lake Rd., 2 story, brick, steel factory, to Robert L. Vaill & Co., 56 Echo Lake Rd. **$40,000.** CD 9/23—ENR 9/25.

Ill., Chicago—FACTORY—Derby Foods, Inc., 33327 W. 47 Pl., 2 story, 90x135 ft. factory addn., 47 Pl. and Turner Ave., to Vagtborg Constr. Co., 251 W. 79 St. Est. **$75,000.** E. A. Schwelwe, 4115 S. Packer Ave., archt.

Ill., Chicago—TERMINAL—Hennepin Transportation Co., 1146 W. Hubbard St., 1 story, 80x152 ft. truck terminal, to A. E. Nelson, 1244 E 79 St. **$45,000.** C. W. Nichols, 59 E. Van Buren St., archt.

Ill., Chicago — CHIP and OIL HOUSE — Studebaker Corp., South Bend, Ind., 1 story, 71x172 ft., brick, rein.-con. chip and oil house, plain fdn., to Consolidated Constr. Co., 9 S. Clinton St. Est. approx. **$50,000.** CD 9/3—ENR 9/11.

Ill., Chicago—WAREHOUSE—Time, Inc., 330 E. Cermak Rd., 1 story, 209x240 ft. warehouse, 2420 S. Holsted St., to C. A. Moses Constr. Co., 176 W. Adams St. Est. **$150,000.**

Ill., Elgin—FACTORY—Chicago Metal Hose Corp., 1315 S. 3 St., Maywood, 1 story, 111x430 ft., brick, rein.-con. factory, to Illinois Hydraulic Stone & Constr. Co., 20 N. Crystal St. Est. **$85,000.** CD 9/3—ENR 9/11.

★**Ill., Joliet**—FACTORY—American Steel & Wire Co., 208 S. La Salle St., Chicago, excav. and substructures for 80x150x470 ft. rod mill and 960x1,500 ft. wire mill, to Powers-Thompson Constr. Co., 27 S. Chicago Ave. Est. about **$2,000,000.** CD 7/15—ENR 7/17.

Ill., Lockport—FACTORY—Frankfort Sailplane Co., J. J. Smiley, pres., Lockport, factory, to Hansen & Petersen Co., 204 S. Des Plaines St., Joliet. **$65,000.**

Ill., Lyons—FACTORY—Alston-Lucas Paint Co., 1031 N. Throop St., Chicago, 1 story, 115x140 ft., brick factory, 7701 W. 47 St., to W. Birovsky Co., 1031 N. Throop St., Chicago. Est. **$75,000.**

Ind., Fort Wayne — PLANT — Studebaker Corp., South Bend, 1 story, brick, rein.-con. chip and oil house, plain fdn., to Charles R. Wermuth & Sons, Inc., 1036 St. Marys St. Est. approx. **$50,000.** CD 9/4—ENR 9/11.

Ia., Mason City—CHILLING ROOM, etc.—Decker & Sons, chilling and curing room, packing plant, to Rye & Henkel, 525 9 St. S.E. **$51,700.**

Kan., Kansas City (Rosedale) — GRAIN ELEVATOR—Continental Baking Co., Union Station Bldg., Kansas City, Mo., 500,000 bu. grain elevator, to James Stewart Corp., 343 S. Dearborn St., Chicago, Ill. Over **$150,000.** Awarded about 9/15. CD 8/1—ENR 8/7.

Kan., Kansas City—PLANT—Kansas City Industrial Land Co., Fairfax Dist., plant addn., Fairfax and Rickel Rds., to Collins Constr. Co., Davidson Bldg., Kansas City, Mo., about **$70,000.** Awarded 9/16. C. E. Keyser, Merriam Bldg., Kansas City, Kan., archt. Sealright Co., Fairfax and Rickel Rds., lessee.

Md., Baltimore—STORAGE—Crown Cork & Seal Co., Eastern Ave. and Kresson St., brick, concrete cork Storage Buildings, 103, 104, 105 and 106, to Cumins Constr. Co., 803 Cathedral St. **$350,000.** Bids 9/16. CD 9/15—ENR 9/18.

Mass., Canton — FACTORY — Draper Bros. Co., Draper Lane, 2 story, 150x200 ft. factory, Washington St., to R. L. Whipple, 44 Portland St., Worcester. Est. **$125,000.** Charles T. Main, Inc., 201 Devonshire St., Boston, engrs.

Mo., St. Louis—PLANT—Herman Body Co., 4400 Clayton Ave., 1 story, 50x108 ft., brick, concrete automobile body manufacturing plant addn., 4400 Clayton Ave., to Murch-Jarvis Co., Inc., Cotton Belt Bldg. Est. **$40.000** incl. equip. H. Van Hoefen, Cotton Belt Bldg., archt.

Mo., St. Louis—WAREHOUSE—Mallinckrodt Chemical Co., 2 and Mallinckrodt Sts., 1 story, 30x143 ft., 46x94 ft. and 32x45 ft., brick, concrete warehouse, concrete fdn., 111 Destrehen St., to James Black Masonry & Contg. Co., 317 N. 11 St. Est. **$40,000.** Jamieson & Spearl, Arcade Bldg., archts.

N. J., Irvington—PLANT—Irvington Smelting & Refining Wks., 374 Nye Ave., 1 story, 84x110 ft., brick storage bldg., to Frank D. Trainor & Son, Inc., 12 Smith St. **$40,000.** Bids 1/3. CD 12/27—ENR 1/2.

N. J., Jersey City — FACTORY — Colgate, Palmolive-Peet Co., 105 Hudson St., altering 7 story factory, Sussex St., to Turner Constr. Co., 420 Lexington Ave., New York, N. Y. Est. **$50,000.**

N. J., Kearny—FACTORY—Kearny Mfg. Co., Inc., 681 Scuyler Ave., 1 story, 72x90 ft., brick, steel factory, 2 story, 21x60 ft. addn., 1 story, 20x30 ft. brick boiler house, Scuyler Ave., to Schroeder Constr. Co., 1009-18 Ave., Newark. C. F. Warren, 158 Magnolia Ave., Arlington, archt.

N. J., Newark — MARKE[T] ... Academy St., 1 story, ba[se] ... concrete block, steel super[structure] ... Orange Ave., to Gordon [Co.] ... Broad St. **$40,000.** M. K[ahn] ... St., archt. A. & P. Super[market] ... ington Ave., New York, N. [Y.] ... see.

N. J., New Brunswick — [PLANT] — Quimby Pump Co., Inc., 340 Thomas ... sign and construction 1 s[tory] ... brick, steel, pump manufa[cturing] ... James F. Mitchell, Inc., ... Newark. **$80,000.**

O., Cincinnati — BUS TE[RMI]NAL — Greyhound Terminal Co., 630 Wa[lnut] ... St., 2 story, 127x180 ft., stone, rein.-co[n.] ... to J. and E. Warm Constr. C[o.] ... Ave. Est. **$300,000.** Bids 9/1[5] ... 8/28.

O., Elyria—CASTING CL[EA]NING—Elyria Foundry Co., Filbert St., 1 s[tory] ... brick, steel casting cleaning ... Brown, Inc., 6007 Euclid Ave., ... **$75,000.** CD 9/17—ENR 9/25.

Pa., Bethlehem—PLANT—Bethlehem Steel Co., E. 3 St., 1 story, 70x496 ft., brick, steel, concrete drop forge plant addn. and 2 story, bsmnt., 60x115 ft., brick, steel, concrete welfare bldg., E. 3 St., to E. C. Machine Co., Commonwealth Bldg., Allentown. Est. **$70,000.**

Pa., Erie—BOILER HOUSE—Hammermill Paper Co., E. Lake Rd., altering, constructing plant exten., to J. C. Hammond, 308 Security Peoples Bldg. Est. **$40,000.** A. S. Goodrich, c/o owner, engr.

Pa., Erie—STORAGE BINS, etc.—Standard Stoker Co., 1701 Gaskell Ave., steel, concrete storage bins, warehouse, office addn., to Upton-Lang Co., 1009 Commerce Bldg. and Sessinghaus & Ostergaard, 1115 Peach St. Est. **$40,000.**

Pa., Fernwood (br. Lansdowne)—FACTORY—Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit, Mich., reconstructing factory, to H. E. Baton, Inc., 1717 Sansom St., Phila. Est. over **$40,000.** Ballinger Co., 105 S. 12 St., Phila., archts and engrs.

Pa., Harrisburg — BOTTLING PLANT — Cloverdale Spring Co., 1620 N. 7 St., 100x200 ft. plant, to Simpson & Carroll, 11 St. and Parkway. Est. **$40,000** with equip.

Pa., Phila.—WAREHOUSE — Electric Storage Battery Co., 19 St. and Alleghany Ave., warehouse, to W. F. Lotz, Frankford Ave. Est. **$40,000.**

Pa., Pittsburgh—MILL—Crucible Steel Co. of America, J. S. Billingsley, dist. mgr., Oliver Bldg., steel mill exten., to Minette Bros., House Bldg. **$40,000.**

R. I., Pawtucket — PLANT — Crompton & Knowles, 300 Armistice Blvd., 1 story, 35x3[0] ft. and 57x112 ft. brick, steel plant addns., Armistice Blvd., to Bowerman Bros., 70 Bath St., Providence. Est. **$40,000.**

S. C., Greenville—FACTORY—Piedmont Shirt Co., Greenville, factory addn., to Henry B. McKoy Co., Greenville. **$65,000.**

S. D., Aberdeen—FACTORY—K. O. Lee & Sons, Aberdeen, 122x233 ft., and 45x100 ft., brick, tile factory bldgs., to Fred Peterson Constr. Co., Aberdeen. **$100,000.** K. M. Fulleton, Anchor Bldg., St. Paul, Minn., archt.

Wis., Milwaukee—FACTORY—O. A. Smith Corp., 3533 N. 27 St., masonry and concrete work, Factory Bldg. 70, 1 story, 223x601 ft., to Hunzinger Constr. Co, Sta. K., F. Von Grossmann, 8233 N. Gray Log Lane, archt. E. W. Burgess, c/o owner, engr.

Man., Winnipeg—PLANT—MacDonald Bros. Aircraft, Ltd., 50 Bobinson St., 2 story, steel frame plant addn., to Couture & Toupin, 207 Montreal Trust Bldg. **$70,000.**

Ont., London—FACTORY—S. F. Lawrason Co., W. Wells, mgr., Nelson St., masonry work, 2 story, brick, steel, 35x120 ft. factory, to W. C. Northey, 371 Wortley Rd. S., steel, to London Structural Steel Co., London. **$45,000.** L. G. Bridgeman, Royal Bank Bldg., archt.

Ont., Toronto—PLANT—Marani & Morris, archts., 46 Bloor St. W., plant addn. for Geo. H. Hees & Son Co. Ltd., 276 Davenport Rd., to Ramsay Contg. Co. Ltd., 39 Indian Road Crescent. **$65,000.** Bids 9/16. CD 9/10—ENR 9/18.

Ont., Toronto—FACTORY—Rogers Majestic (1941) Ltd., 622 Fleet St. W., factory addn., to Ramsay Contg. Co., Ltd., 39 Indian Rd. Crescent. **$70,000.** T. Pringle & Son, Ltd., 36 Toronto St., engrs.

Ont., Toronto—PLANT—Sproatt & Rolph, archts., 1162 Bay St., plant exten., for Rolph, Clark & Stone Ltd., 201-3 Carlow Ave., to Foundation Co. of Ontario, Ltd., 1158 Bay St. About **$50,000.** Bids 9/19. CD 9/18—ENR 9/18.

Ont., Welland—MACHINE SHOP—Canadian Foundries & Forgings, Ltd., Empire St., 1 story, 60x166 ft., steel, brick machine shop exten., concrete pier fdn., to Gardner Constr. Co., Ltd., 7 Riverbank St. **$44,000.**

Ont., Windsor—PLANT—Dominion Forge & Stamping Co., R. Herdegon, mgr., 2468 Seminole St., 1 story, 70x120 ft., steel factory addn., to Allan Constr. Co., 44 Wyandotte Sts. E. Est. **$40,000.**

Que., Montreal—PLANT—Canadian Vickers, Ltd., 5136 Notre Dame St., plant repairs, to Belmont Constr. Co., Ltd., 679 Belmont St., about **$100,000.**

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